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THE  
MEDICAL  
TEMPERANCE  
JOURNAL.

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THE

# MEDICAL TEMPERANCE JOURNAL.

October, 1869.

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## Original Contributions.

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### TEMPERANCE AND PHYSIOLOGY.

ONE of the chief causes of the general use of intoxicating drinks is want of correct ideas as to their composition and physiological action. If we had the power to examine the persons who use wine, or beer, or spirits, how many should we find who really know anything of the nature of the drinks they consume? And if we found them unacquainted with the composition of the drinks, we should find them, if possible, more ignorant of the action of those drinks when introduced into the human body. When the temperance movement commenced, temperance reformers knew so little of the nature and physiological action of alcoholic drinks that they appealed to their fellow-men to deny themselves, to make a sacrifice, and to give up the use of strong drink, for the sake of their weaker brethren. Now the case is altered. Temperance reformers take their stand on the facts of physiological research and practical experience, and denounce the use of alcoholic drinks on the ground that the use of these drinks is inimical to health. The temperance question is of great importance in its moral and religious bearings, in its social and political aspects; but it is also essentially a health question. It is intimately connected with the prevention of disease and the promotion of health. Drunkenness is one of the diseases produced by the use of alcoholic drink, and it can only be cured by entire abstinence from the drink which causes it. This is now generally known. It is not, however, equally well known that all intoxicating drinks are not only unnecessary to persons in health, but positively injurious. But all who have studied the subject practically, by physiological

research, by extended observation, and personal abstinence, will endorse the opinion that strong drink is unnecessary and injurious. There is also a general opinion among persons who have studied the physiological action of alcohol, that the medical profession labour under error as to the use of alcohol in the treatment of disease—that it is used when unnecessary, and frequently with the most injurious results. The work of temperance reformers, then, is to obtain and diffuse correct information as to the nature and effects of alcoholic liquors, and the safety and advantages of abstinence. They are true sanitary reformers; for temperance is a most important part of preventive medicine. Without saying a word in disparagement of other efforts for the promotion of the public health, we are convinced that nothing would conduce so much to the physical improvement and social elevation of the lower classes of our countrymen as total abstinence from strong drink.

In attempting to diffuse sound views respecting strong drink we have to encounter the prejudices arising from want of physiological knowledge. At present an acquaintance with physiology does not form part of popular education. And we have met with persons who had received what has until recently been considered a good education who knew nothing of their own bodies or minds, nothing of light, heat, or electricity, nothing of the sources of health and strength, or the nature of food and drink, or, in other words, nothing of the experimental or biological sciences. And if this want of knowledge is to be found in the educated, what must be the condition of the uneducated? Can we wonder at the popular delusions respecting strong drink? But a change is coming. Science is winning its way to recognition as a part of education. Physiology is becoming a study in our schools and colleges, and we may expect these improvements in education to aid the efforts that are being made to show the reasonableness of abstinence from alcoholic liquors. A great amount of useful physiological information has been given at temperance meetings, and in the various temperance periodicals. But the physiological and medical department of the temperance reformation is of such great importance that the Committee of the National Temperance League has published this Journal for the express purpose of discussing the chemical, physiological, and medical bearings of the question. We know that a belief in the usefulness of strong drink deters many from joining our ranks, and that many from want of physiological knowledge have been induced by their medical advisers to give up abstinence, and to take wine or other intoxicating drink. The remedy for these and all other errors in theory or practice respecting strong drink is knowledge and experience. The two must go

together. A man may have a theoretical knowledge of the nature of strong drink and its effects, but if he is without a practical acquaintance with abstinence, he is not competent to form a correct opinion on the subject. When medical men or other persons recommend the use of strong drink, and venture to give their reasons for the recommendation, a very small amount of knowledge, and a very little logic, will generally suffice to show the weakness of the reasons and the folly of the recommendation. If we were disposed to indulge in satire, we might find ample materials for it in the strange reasons we have heard assigned for the use of strong drink. It will be the mission of this Journal to detect and expose medical and other fallacies relating to the physiological or medical properties of alcohol, to give an account of the most recent experimental investigations on the subject, and to furnish reports of the successful treatment of disease without the aid of strong drink.



## THE THERAPEUTIC ACTION OF ALCOHOL.\*

It was with pleasure that we perused this last work on Therapeutics by Dr. Ringer, who, as a teacher and physician, has won the esteem of his medical *confrères*. The work is evidently designed for students and young practitioners, as the author has omitted controversial and speculative questions, and confined himself to the more pleasing task of stating only that which is practically known of the application of remedies in disease. Much of the arrangement of the book has been borrowed from the German work of Buchheim; and great praise is due to the author for so voluminous a compilation of much that has been written of the administration of medicines more commonly used in the treatment of disease. We naturally turned to the article on "Alcohol," expecting to find some important information on the uses of this drug as a curative agent in disease. We cannot but admit, that, after perusing about twelve pages of letter-press, we were not much enlightened, or more in favour of the use of Alcohol in the treatment of disease than before. Many of the old errors and fallacies relative to the action of alcohol in the system, long since refuted, especially regarding it as food, have been retained; and very little information is given respecting the practical value of this drug as a medicine.

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\* *A Handbook of Therapeutics*. By SIDNEY RINGER, M.D., Professor of Therapeutics in University College, &c. &c. London: H. K. Lewis, 1869.

The compiler, for convenience, groups alcohol with chloroform and ether, as the action of these three medicines is similar. They each at first produce excitement, with increased strength of pulse, and after a time this stage of excitement gives way to one of unconsciousness, which may be profound. With chloroform and ether the stage of excitement is short, and soon passes into that of insensibility, which may be continued for a long time without danger to life. With alcohol the early stage of excitement and intoxication is of considerable duration, and insensibility and unconsciousness are not reached until very large quantities have been taken, and till some time has passed,—a stage of imminent danger of death from paralysis of the heart and of the movements of respiration. Every medical practitioner, who has observed the various phenomena of intoxication from the administration of alcohol, will arrive at a similar conclusion.

As an external application, alcohol is recommended for the abstraction of heat, to cool the surface of the body, to harden the tissues, to prevent bed sores, to harden the nipples of a suckling woman, &c.

When taken into the stomach it exerts a double action. It may affect the gastric juice, and also the secreting mucous membrane. If the quantity of alcohol be small, its effects on the pepsine of the gastric juice is insignificant; but when large quantities are taken, the pepsine is destroyed, and loses its power to dissolve food.

In moderate doses, our author says, alcohol has been experimentally proved to increase the secretion of the gastric juice, and every-day experience confirms this fact. After large quantities the stomach is upset, its mucous coat inflamed, and this is covered with a thick tenacious mucus, and loses its power to secrete.

Every scientific enquirer would like to know what is meant by a *moderate* dose of alcohol; and it would very much solve this *questio vexata* if evidence could be furnished that alcohol has the power of increasing the secretion of the gastric juice. We have for some years made ourselves acquainted with what has been written on this subject, and also conducted many hundreds of experiments with alcohol, but have arrived at far different deductions from the author of this work. Numerous eminent physicians and physiologists of this and other countries have come to the conclusion that the moderate use of alcohol is a physiological error. Dr. Lankester, F.R.S., says, “The fact is, alcohol does harm to the living tissues in proportion to the purity in or the strength with which it is applied to the tissues. Beer and wines injure directly in proportion to the quantities of alcohol they contain; and the generous (?) wines of Spain, and

sound (?) ales of England, follow in order the destructive influence of ardent spirits. The habitual use of ardent spirits, even in small quantities, cannot but act injuriously on the system."

Drs. Todd and Bowman say, "That alcohol retards digestion by coagulating the pepsine, an essential element of the gastric juice, and thereby interferes with its action. Were it not that wine and spirits are rapidly absorbed, the introduction of them into the stomach, *in any quantity*, would be a complete bar to the digestion of food, as the pepsine would be precipitated from the solution as quickly as it was formed by the stomach."

Evidence of this character from numerous authors need not here be multiplied.

Our author affirms that it may be easily understood how alcohol, by its influence on the functions of the stomach, is very useful in disease, for it not uncommonly happens that persons when much fatigued lose all appetite and power to digest, who, if they eat food, suffer from this laying undigested on the stomach. Such people may have their appetite and digestion restored to them by the aid of a glass of wine, or a little brandy-and-water, taken shortly before food is eaten. We have generally experienced in our practice that the best remedies for fatigue of body were rest and sleep, not bad drinking, and giving the stomach in a weakened condition more work to do. The apparent temporary relief derived from the use of stimulants at such a time is necessarily purchased at a great cost to the constitution, which must inevitably, sooner or later, break down.

Our author repeats the assertion that alcohol in the moderate dose of a glass of beer, or wine, or weak brandy-and-water, stimulates the stomach to an increased secretion of the gastric juice, and thereby assists digestion.

If this were a physiological fact, would not two glasses of beer or wine cause the stomach to secrete double the amount of this solvent fluid, and so in like proportion for every glass taken? Is it a proven fact that after a glass of beer or wine, taken at any time, there is a flow of gastric juice into the stomach? This circumstance is precisely stated by the author; but is it truly a fact? The direct experiments on the gastric juice by Dr. Munroe, and on the stomach of Alexis St. Martin by Dr. Beaumont, prove the very opposite condition to arise. The stomach secretes this powerful fluid to effect the solution of *solids*, not liquids.

Dr. Beaumont completely demonstrated this fact in one of his valuable experiments, where the only fluid which exuded from the coats of St. Martin's stomach, on the contact of alcohol, was *an enlarged supply of its natural mucus*, and that, evidently, with a view to sheathe its delicate structure from the irritating influence

of the poison. To expect the stomach to secrete gastric juice at *all* times, on the contact of alcohol, would not be an expectation in accordance with the ordinary laws of nature.

Dr. Munroe's experiments verify the fact that alcohol does not either digest food or aid the gastric juice to digest it; but, so long and so far as it does operate at all, protracts that process. Luckily for persons taking alcohol is it that it does not stay long in the stomach; so that a new supply of gastric juice following may complete the digestion. Is it not a fact that alcohol, taken in small quantities or largely diluted, as in the form of beer, causes the stomach to lose its tone, and makes it dependent upon artificial stimulus? Atony, or want of tone of the stomach, gradually supervenes, and incurable disorder of health results. If you habitually give an organ assistance, it will at last come to trust to that assistance, and refuse to work without such aid being rendered.

Again, is it sound practice to order moderate doses of alcohol to convalescents from acute diseases, when the powers of the body remain a long time depressed; and, among others, the digestion remains weak? Is it the best treatment to give wine and spirits to those who live in towns, and lead sedentary lives? for in such digestion is often imperfectly performed. The evidence of those medical practitioners who have pursued the non-alcoholic treatment is much in favour of such a course being adopted. What advantage has alcohol, as a local stimulant, over a little camphor, ginger, or pepper, in exciting a flow of gastric juice, when alcohol, as an anæsthetic, interferes with perfect alimentation, and, in especial, arrests that change of matter in the body which supplies the valuable material of the gastric juice itself?

The action of alcohol, according to the strength in which it is taken, irritates the mucus surface of the weakened stomach, though it may for a time dull the feeling of pain. The fact cannot be ignored that abstainers have better and more regular appetites than moderate drinkers; can eat more, and digest their food better, than those who indulge in beer and wine. We have known numerous convalescents who have recovered their appetites, and acquired increased power to digest food, after they had given up taking their wine and beer. No greater fallacy exists than to suppose that alcohol has the power to increase the flow of the gastric juice, or to give nervous tone to the system debilitated by disease.

The author gives a true picture of the condition of those persons who habitually use alcoholic drinks. He says:—

“By the prolonged indulgence in alcoholic drinks, the stomach becomes, after a variable time, very seriously damaged from the chronic catarrh which

is excited. The mucous membrane is coated with a tenacious mucus, that excites unhealthy fermentation in the food, and the structure of this membrane is also considerably altered, for there occurs a great increase of the connective tissue, which, by its contraction, obstructs and destroys the secreting follicles and their lining cells. The mucous membrane thus becomes thickened, hardened, and uneven; and in its substance, from obliteration of the orifices of follicles, while the part beneath them remains undestroyed, cysts are formed, which enlarge from the accumulation of cells within them. In consequence of these serious changes, very little gastric juice is poured out in response to the demand made by the food, while in this, by the mucous coating of the stomach, unhealthy fermentations are excited, and hence there is produced much gas, with various acids, such as butyric, acetic, &c., which produce acidity and heartburn."

If this be true, how is it that convalescents, or persons living in towns and leading sedentary lives, escape having catarrh of the stomach? Is not the habitual, though moderate use of alcoholic drinks the great cause of the vast number of diseases which the medical practitioner has to treat in hospital as well as in private practice? Why not in this condition persevere in the administration of alcohol to assist the stomach to secrete more gastric juice? Surely it will be as effectual in the one case as in the other. Our author remarks that alcohol passes readily into the blood; and its effects on this fluid, and the tissues to which it is conveyed, will next be considered.

We will here, for the present, take our leave; and, in a future number, place before our readers some of the salient points of the action of alcohol in the body. We cannot, however, close our remarks without awarding our meed of praise to Dr. Ringer, for his valuable contribution to our knowledge of therapeutics.



## EXCESSIVE MORTALITY IN LARGE TOWNS.

WE avow ourselves the friends of every reasonable plan for preventing or curing disease and prolonging life, and we firmly believe that a great amount of sickness and mortality arises from causes under human control. Hence we rejoice at the better drainage of our towns, at the utilisation of sewage, at improved supplies of pure water, at the establishment of baths and wash-houses, the erection of better dwellings for the people, and, in short, at all measure likely to diminish human suffering and promote the physical and moral improvement of the people. But we are convinced that after all that sanitary enactments and boards of health can do, the greatest work of all will be to teach the people the laws of health and to excite in them a desire for personal reform. The last quarterly report of the Registrar-

General showed that, in spite of important sanitary measures and an abundant supply of good water, there was in some of our large centres of population a very high rate of mortality. The report states that—

“The high rate of mortality in Glasgow is partly due to epidemic and other diseases, to which children succumbed in undue proportions to the rest of the population. While protection against the diffusion of cholera poison by means of an impure water supply has been secured in this city, the importance of aiming at immunity from other generating elements of disease should not be lost sight of. Glasgow is supplied with an abundance of good water, but other sanitary defences have been practically overlooked. Dr. Gairdner reports that the true causes of the excessive liability of this city to high tides of disease and death are to be sought chiefly in the low standard of domestic comfort, in overcrowding, general squalor, and physical degradation, which are the unhappy characteristics of a large section of the population. The city of Manchester, which is also supplied with an abundance of pure water, shows a high rate of mortality, but it is considerably lower than the Scottish city. Why cannot the administrative abilities, which have been so successful in commanding a pure water supply, be as successfully applied, not only in the demolition of old tenements, but in the erection of new constructions and improved house accommodation for the poorer classes, and also in enforcing the law against overcrowding?”

There appears to us a great fallacy in assuming that the remedy for this excessive mortality will be, “not only the demolition of old tenements, but the erection of new constructions and improved house accommodation for the poorer classes.” Our idea is that the chief cause of the mischief is in the ignorance and bad habits of the people, and that the most important step in the way of preventing the excessive mortality among the poorer classes would be the demolition of the use of alcoholic drinks. Those drinks injure health by their baneful action upon the bodies and minds of their devotees, and the waste of money in the purchase of the drinks renders the poorer classes of town populations unable to pay for healthy or decent dwellings. The use of alcoholic drinks destroys self-respect and the love of personal and domestic cleanliness. It reconciles its victims to bad air, bad food, and other agencies likely to induce disease and destroy life. We may have old tenements demolished, and better dwellings erected; the laws against overcrowding may be more strictly enforced; but these and all other sanitary efforts will be comparatively unavailing while the present enormous consumption of body and soul destroying drink is kept up. It has been asserted that people drink because they live in miserable homes. We think that the reverse of this is generally true, and that most of them live in wretched dwellings because they drink. That is our conviction in reference to the condition of the inhabitants of the most miserable and over-crowded districts of London. Many working men waste money enough in drink and tobacco to enable

them to pay for railway tickets to convey them to suburban districts, where they might have healthy homes for themselves and families for less rent than they now pay for miserable apartments in pent-up courts and alleys, where pure air never comes and the invigorating rays of the sun are seldom felt. We have seen some wonderful sanitary changes effected without the aid of acts of parliament, or boards of health, or the demolition of old tenements, or the erection of improved dwellings. We have seen poor working men, inhabitants of miserable dwellings, sign the teetotal pledge, forsake the public-house and all its vicious surroundings, and begin at once to take steps for the promotion of personal and domestic hygiene. Soon they and their families showed unmistakable signs of sanitary reform. Better clothes, better diet, better dwellings, domestic peace, education for their children, attendance at the house of God, followed the ceasing to drink intoxicating liquors.

We may be accused of taking a one-sided view of the causes of the great mortality in Glasgow and other towns ; but we are convinced that a careful inquiry into the condition of the lowest classes, as well as into the condition of the working classes of a somewhat higher grade, would show that the chief cause of ignorance, poverty, disease, and premature death, is the consumption of intoxicating drink. At the annual meeting of the British Medical Association, held at Leeds in July last, the question of sanitary reform was discussed ; and Dr. W. T. Gairdner, in the course of his speech, said, " He had the authority of the chief superintendent of police for saying that never in his experience was drunkenness and physical degradation anything like so bad as they were now. This was beyond the control of the present Sanitary Acts ; and if the convention could do anything towards dealing with that evil, it would be perhaps the best direction in which they could act." Dr. Syson, of Salford, in the course of the debate, " emphatically stated that health officers could not shut their eyes to the fact that a large proportion of the mortality among the people was due to their drinking habits." Strong drink is the great bane of our country, and to prevent its dire effects upon the health and lives of the people should be one of the great objects of sanitary reformers. The use of this drink has come down to us from the days of physiological darkness ; the people have been trained up to take it ; a national appetite for it is created ; fashion sanctions its use ; most erroneous views prevail respecting its virtues ; and hence its consumption by all classes, and the numerous evils produced by it. The friends of health, education, and religion ought to combine their efforts in enlightening and reforming the people. This must be done by precept and example. One cause of using the drink is want of

knowledge. The people require instruction in elementary chemistry and physiology. They should be taught the way in which health may be maintained or injured; the value of air, water, food, light, heat, exercise, rest, sleep, and other hygienic agents. They should be taught that all narcotic poisons are inimical to health, and that all intoxicating liquors are unnecessary and injurious; and, above all, the safety and advantages of entire abstinence from all alcoholic drinks should be unceasingly inculcated. In this way, and by the force of personal example, we may hope to instruct, reform, and elevate the people, and aid every effort for their physical and moral improvement.



#### DR. ANSTIE ON INDISCRIMINATE STIMULATION.\*

IN this article by Dr. Anstie there is contained some sound advice as to the indiscriminate use of alcohol in chronic disease. There is perhaps no physician living who has devoted so much time and energy to the investigation of the physiological action of alcohol; and, although we may somewhat differ from him in some of his conclusions, yet we cannot but admire his industry and devoted application to the study of the important part which alcohol plays when introduced into the system. Dr. Anstie has not only been the able defender of the principles which guided the practice of the late maligned Dr. Todd; but he has also been the able expounder of the alcoholic treatment of disease, as practised by that hardworking and popular clinical physician. Dr. A. complains somewhat of the indecorous behaviour of the profession, which, after Dr. Todd's death, fell foul upon him as the great heretic, and with a hundred tongues and pens, and a chorus of reproach, defamed his memory.

There can be no doubt that, at this particular juncture, the simultaneous publication of the researches of Lallemand, which seemingly proved that alcohol could not act as food, but was altogether a poison, produced a great reaction in the minds of the profession, and caused vast numbers of its members to be drawn to the study of the action of alcohol in the treatment of disease who otherwise would not have troubled themselves with the investigation.

Dr. A. deems the whole affair as admirably illustrative of the vulgar proverb, "Out of the frying pan into the fire;" and asserts

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\* On Indiscriminate Stimulation in Chronic Diseases. *The Practitioner*, July, 1869. London: Macmillan & Co.

that the unreasonable terror of the doctrines of Dr. Todd, instead of putting an end to an indiscriminate system of stimulation, has tended to direct the medical use of alcohol into new and more dangerous channels. After many years' experience of the treatment of disease with and without the use of alcohol, we cannot but admit that we have arrived at a far different conclusion; and that, instead of "hopping out of the frying-pan into the fire," we may now congratulate ourselves, by pursuing the non-alcoholic treatment, in keeping out of the frying-pan, and therefore, having no dread of the fire.

It is not our desire, at the present time, to defend or deprecate the principles of Dr. Todd in his treatment of disease with alcohol; nor do we at all coincide with the opinion expressed by Dr. A., that the reactionists have failed to understand the real essence of his teaching as regards the medical use of alcohol. We are still of opinion that the benefits to be derived from the use of alcohol have been enormously over-rated, and that its employment has been empirical and injurious. If Drs. Todd and Anstie regard alcohol as a combustion food, with some capacity to aid the nutrition of the nervous system, which was specially applicable as a substitute for other foods in the *pyrexial state*, how do we ignore the fact that patients in such a condition have recovered in a shorter period of time, and in a greater ratio, without its use than with it?

The hurried acceptance by English physicians and physiologists of the conclusion of Lallemand that alcohol is not a food, we will not now discuss; but will content ourselves with bringing before our readers some valuable observations made by Dr. A. on the indiscriminate use of alcohol.

Dr. A. affirms that there are undoubted instances in which there is a distinct toleration for large doses of alcohol. For instance, he says:—

"1. There assuredly is a marked tolerance of this kind in many cases of chronic debility which have been induced by one or more copious hæmorrhages. 2. There is a variety of pulmonary phthisis, especially common in persons with delicate skins and slight frame, with marked tendency to colliquative sweating, and a notable inability to assimilate either ordinary foods or fatty matter of any kind, in which the tolerance for large and long-continued doses of alcohol is very remarkable, and the benefit produced by such treatment is very great. 3. In certain chronic neuralgias of the aged, where the power of digesting ordinary food is almost suspended by reflex irritation, an almost exclusively alcoholic diet, continued for some time, occasionally works wonders. 4. In certain infantile chronic diseases, attended with marasmus and an inability to digest ordinary food, small and frequent doses of alcohol, continued for some weeks, produce a remarkable revolution in the general condition."

In reply, we would remark that it has been our lot to attend hundreds of cases of chronic debility, arising from large and copious

hæmorrhages, especially after difficult and prolonged labours, and we have found that our patients recovered sooner, experienced a less amount of secondary fever, and other abnormal actions, without the use of alcohol than with it. 2. With regard to the treatment of pulmonary phthisis with alcohol, we shall, in a future number, have to draw attention to the advantages to be derived from the administration of proper foods in the place of this hydrocarbon. 3. We are at a loss to know what advantage alcohol has in cases of chronic neuralgia in aged people, over other pure narcotics, setting aside the mischief of creating a desire for intoxicating drinks, which have been the ruin, morally and physically, of thousands upon thousands of our fellow-creatures. 4. In certain infantile chronic diseases, attended with marasmus, we have seen good milk and cream work greater wonders than ever did small and frequent doses of alcohol.

Dr. A., in this paper, boldly speaks out his convictions, for the serious consideration of the profession, of the injury arising from the use of alcohol in certain chronic diseases, and feels not only surprised, but alarmed, at the recklessness with which it has been prescribed in the two vast groups of neuroses—the neuralgic and the convulsive—and a third, which includes the thousand-and-one forms of hysteria and of hypochondriasis.

With regard to the creating an overwhelming appetite for intoxicating drinks, after the administration of them in certain chronic diseases, we cannot but accord our hearty commendation of the way in which Dr. A. condemns such practice. His conclusions, as to the injury arising from the administration of alcohol in chronic or nervous diseases, attended with much mental depression, the majority of which, either at once or very readily, develop a strong liking for alcoholic beverages—a liking, too, which is often of the most dangerous kind—are exactly those which years ago we had arrived at. Dr. A. graphically describes a case, unfortunately too common—the case of women who, whether married or not, have difficult and painful menstrual periods, accompanied with neuralgic pain and hysteric depression of spirits. He says:—

“ If ever there were a case in which the physician may make himself, in the most tragic sense, the evil genius of his patient, it is this. The woman has pain or spasm, or both, and the doctor tells her that brandy will relieve these symptoms, which is true enough. It is also true, that if the brandy could be administered strictly as a medicine, regulated to the minimum dose which was necessary, no harm would be done, though no permanent cure could be expected. But if it be left to the patient herself to settle the dose, there is the greatest danger that she will exceed the necessary quantity, and, instead of taking a moderate stimulant dose, which would relieve pain without narcotising, will take a quantity which produces semi-intoxication. There is no more dangerous trial, for a female who is subject to these periodic attacks of pain and depression, than that first experience of alcoholic narcotism. In such cir-

cumstances it is a melancholy fact, that the oblivion of slight drunkenness is most seductive; and the chances are great that on the recurrence of the same symptoms the patient will long, with increasing eagerness on each successive occasion, for the same luxurious stupefaction. Let no one think that this warning is the expression of fears based on mere imagination: my own experience has supplied only too many instances of the reality of the danger; and inquiry among physicians whose practice in nervous diseases is large has added greatly to the strength of my convictions. I have for a long time made it a rule never to recommend, or even allow, a patient subject to ovarian neuralgia to take alcohol at all, except in the ordinary quantities with meals. Pain and nervous depression is best quieted with small subcutaneous injections of morphia, or, still better, of atropia. It is a very bad precedent to permit a woman to take alcohol for the mere momentary relief of pain or depression. The whole group of chronic, painful and convulsive disorders, stands in the same relation to alcohol. The remedy can be administered strictly as a medicine in small stimulant doses, with good effect. But there are more elements in the case which we cannot, without grave peril, leave out of sight. The patients are very generally weak in their power of mental resistance, so that to expose them to a temptation is more than usually dangerous. Some persons will be surprised at this statement, and no doubt there are splendid exceptions to be found in individual cases; but I am convinced that the rule is such as has been stated. To the few who bear up heroically, and with undiminished intellectual and moral force, against chronic pain and mental misery, must be opposed an overwhelming majority who do not bear up at all, or who do so only by drowning their troubles either in actual physical narcotism, or else in some factitious emotional intoxication, which is nearly or quite as bad as the other. Therefore to put such an agent as alcohol into the hands of such persons, or in any way to encourage their taking it at other than the usual meal-times under the restraint of the presence of other persons, is to court danger in a most direct manner."

We quite concur in the observation of Dr. A., that alcohol should never be directly prescribed for the relief of chronic pain, convulsion, or spasm during the *self-conscious period* of life. During the whole of this period, which corresponds to the sexual life, especially in women, the organism is so exquisitely alive to its own emotions, that the effect of a false step in the direction of narcotic indulgence may be tremendous.

We are exceedingly anxious, in taking leave of this admirable article, to do justice to its author. We feel more than ever that the time will soon arrive when alcohol will be prescribed with the greatest care in the treatment of disease; and that, not indiscriminately in the form of beer, wine, or brandy, but as *a medicine* chosen out of the forms contained in the pharmacopœia, and taken by the patient ignorant of its presence.



## INFLUENCE OF ALCOHOL ON THE TEMPERATURE OF THE BODY.

ALTHOUGH alcohol is largely used as an article of diet and in the treatment of disease, very little is generally known of its physiological action. There have been experimental investigations into its properties by different chemists and physiologists, and some light has been thrown on the subject, but much more must be done before we shall clearly understand its action in the human body. It is by extended operation of its effects, and by carefully performed experiments, that we must hope to arrive at the truth. As an illustration of our statement that little is really known of the action of alcohol we might refer to the vexed question, Is alcohol food? But on this occasion we will take another question, Does alcohol produce heat? The popular opinion is that spirits warm the body; and this agrees with the theory of *Liebig*. He represented alcohol as fuel, and, in common with other non-nitrogenous articles of diet, as furnishing heat to the body. On the other hand the experience of the Arctic voyagers, and of Dr. Hayes (surgeon and commander in U.S. second Grinnell Expedition) showed that spirits lessen the power of resisting cold. And the experiments of *Dumeril* and *Demarquay* showed that intoxicated dogs were greatly reduced in temperature. Other investigators found a reduction of temperature produced by even moderate doses of spirits. *Dr. Thudicum*, however (in the tenth Report of the Medical Officer of Health published last year), maintains that whilst large doses of alcohol cause a reduction of temperature, moderate doses have an opposite effect. *Dr. Thudicum* says, "If we take a man and let him drink as much as he can and likes, we find that his temperature when he is in that state is considerably decreased, even by one or two degrees. In ordinary persons who take the quantity of alcohol which I propose to make the standard, namely two ounces in a given time, no lowering of the temperature takes place, but rather a slight increase—a quarter of a degree or so, but not more." So far the evidence (except *Dr. Thudicum's*) seems to be rather in opposition to the popular idea of spirits imparting warmth, and to the theory of *Liebig*, that alcohol in the human body combines with oxygen to furnish heat. But fresh light has been thrown on the question. The *Practitioner* for September contains an article by *Professor C. Binz*, of Bonn, "On the influence of alcohol on the temperature of the body." *Professor Binz* describes some of the experiments of *Lichtenfels* and *Fröhlich*, in 1852, on the operation of small non-poisonous doses on the animal economy. In one of

these experiments twenty-four ounces of beer, containing between three and four per cent. of alcohol, caused a reduction in temperature in fifteen minutes of half a degree of the Centigrade thermometer, and remained so for more than an hour. Other experiments are also given, but there were some errors in the mode of observation which have been corrected by improvements in the application of the thermometer in recent experiments. All the experiments by *Professor Binz* were made with the Centigrade thermometer. There were about forty-nine experiments. *Professor Binz* says:—

“The first series were undertaken to determine the effect of very small quantities of alcohol upon the temperature of the body. We started with the conviction that the stimulating influence of the alcohol was as indubitable on the vital properties of the juices as on the nervous system. But the results of our experiments were not in accordance with this view.”

In experiments on dogs very small quantities of alcohol produced a reduction of temperature:—

“Experiments on man, made with small quantities of alcohol, led to very similar results. Half a glass of light hock, or a small glass of cognac, caused a fall of from  $0.4^{\circ}$  to  $0.6^{\circ}$  in a very short time.”

The next series of experiments were with large doses of alcohol, and in these cases there was a much greater reduction in the temperature. In experiments with poisonous doses a constant fall in temperature occurred “amounting to between  $4^{\circ}$  and  $5^{\circ}$  in from one to two hours, at which period death took place.” These researches give reason to believe that the idea of alcohol being a heat-giver is an error, and that it is actually a *cooler*. And *Professor Binz* argues in favour of its use as a refrigerator in certain diseases where a high temperature is one of the dangerous symptoms. We can imagine how the friends of a patient would be astonished at a doctor ordering brandy to *cool* the patient, the popular notion being that brandy can warm. But, according to *Professor Binz*, “Alcohol is frequently called upon to act as a preservative of life by its antipyretic properties.” *Professor Binz* says:—

“It remains for us still to consider to what causes we are to attribute the refrigerating influence of alcohol, and there appear to be three possibilities: that it may operate upon the nervous system; that it may act on the means which the system possesses of regulating its temperature by the perspiration; or, lastly, that it may exert its influence directly on the oxidising processes which take place in the juices. After all that has been said upon the subject, it is the last action which seems to be by far the most probable.”

According to the Professor's view the *cooling* influence of alcohol is due to the obstruction of the action of oxygen, or, in other words, to an interruption of the processes of life. *Dr. T. K. Chambers*, at page 37 of the fourth edition of his “*Clinical Lectures*,” recognises this obstructing action of some agents.

He says, "As poisons we do use them on animals for certain purposes of our own; alcohol is given to puppies to keep them small dogs; and it is stated that dwarf-like jockeys have been produced by the same treatment." If, then, further experiments should place beyond all doubt the statement that alcohol acts as a *cooler* in the human body, the question will be whether there are not better and safer refrigerating agents than this poison. The experiments of *Professor Binz* show how little foundation there has been for various theories respecting alcohol. The late *Dr. Pereira*, in one of his lectures, said that the use of spirit as a heat-producer had been overlooked by Temperance societies, and many opponents of abstinence have quoted the views of *Liebig* as to the heat-giving value of alcohol. Alcohol is certainly a "mockery," for all classes of men have been deceived by it. It has had all kinds of virtues ascribed to it without any proof that it possessed them. If *Professor Binz* were to carry out an extended investigation into the supposed virtues of alcohol, he would no doubt discover that the belief in its usefulness rested upon little better foundation than the belief in its heat-giving power.



## VIOLENT INFLAMMATION EXCITED BY THE USE OF ALCOHOL.

BY R. MARTIN, M.D.

THE following case will, I think, show decisively how the use of alcoholic liquors may excite and aggravate inflammatory action.

M. T., æt. 17, is the daughter of a farmer living in a very healthy district. The young lady is of rather a delicate constitution, her general health not very good. I was called to see her in consultation with the family surgeon. She was suffering from menstrual derangement, but chiefly from acute synovitis, the right knee being enormously swollen, very red, and exquisitely tender; she was in terror if an attempt were made to touch it. There was considerable destruction of the tissues, about the joint two or three sinuses had formed, and considerable venous hæmorrhage had occurred. She was hectic, and could neither eat nor sleep. I was told that she had no desire for food of any kind, resisted the efforts made to induce her to take it, and was being almost wholly kept up by brandy and port wine.

The practitioner who had the case in charge seemed to believe that these liquors were eminently strengthening; that the wine was highly nutritious, having a considerable affinity to blood, and that in pouring this freely into his patient, he was enriching

the vital fluid in the most direct and effective manner. Great, therefore, was his surprise when I urged that, instead of keeping the patient up, he was keeping up the disease. It was only after considerable discussion and some expostulation that I could induce him to consent to omit the use of stimulants; he declared that if the supply were cut off, she would inevitably sink. I pointed to the fact that she was already sinking; and that unless an alteration could be quickly brought about, the final event was merely a question of days and hours. I showed that no change could well be for the worse, but promised that if at the end of a few days there were not an improvement, then we might reconsider our policy. No alteration was to be made in the general treatment of the case, but merely in the diet. She was to take two pints of beef-tea and two pints of milk in the twenty-four hours, and more, if possible.

Four days after, I saw her again. She had been induced to take all the beef-tea and milk ordered for her. There was a sensible improvement, she had more colour on her lips, more expression in her features, was not in such terror when an attempt was made to examine the affected limb. The knee was evidently less inflamed; there was diminished redness and tumidity. The hæmorrhage had also greatly lessened. The alteration for the better was so unmistakable, that my medical friend had not a word to say against our continuing the dietary previously agreed upon.

Five days afterwards I again visited the case, and found everything progressing most satisfactorily. The knee still diminishing in size, the redness and tenderness were less, and the poor girl could now not only let the leg be touched, but was able to bear removal from her bed to a couch at intervals during each day.

At my fifth visit, twelve days after first seeing her, the progress made was so very satisfactory that I considered it totally unnecessary to continue my attendance. The hectic had departed, pain had almost disappeared, she could sit up in bed, reading or working for short periods. I therefore left her in the hands of the surgeon and of her friends, all parties being highly delighted with the progress she had made.

One evening, about three weeks afterwards, I received a hurried message earnestly requesting that I would at once visit the young lady, as she had relapsed, and was as bad as ever. I thought that there must be some mistake on the part of the messenger. Great was my surprise, however, and regret, to find that the statement was quite true. The knee was extremely swollen and angry looking, as exquisitely tender as before, sinuses had again formed, and again considerable hæmorrhage had occurred; indeed it was the sudden violence of the latter which had induced the parents of the young lady to send for me so suddenly.

On retiring with the ordinary medical attendant, almost his first exclamation was, "If I had my way, I should amputate." My equally frank reply was, that unless some change for the better could be speedily brought about, the loss of the limb would be necessary in order to save life. The poor young lady evidently endured excruciating pain, which destroyed her appetite and prevented sleep. Again, she suffered from hectic and nightly perspirations of a profuse character.

I need scarcely say, that I made most careful inquiry, both from the medical attendant and from the friends of the patient, as to what had led to the relapse, but I was assured there was no known cause. I ascertained, however, that after I had given up attendance, there had been a recurrence to the wine which I had prohibited, with the hope of more rapidly getting up the patient's strength. A change for the worse soon occurred; but such was the extent to which the minds of the doctor and parents were dominated by the belief in the invigorating properties of port wine, that they could not, or would not, believe that its administration had anything to do with the relapse. Indeed, the complaint was, that the patient would not take sufficient.

I was inexpressibly astonished, and not a little annoyed, that after all they had seen, they should have been guilty of the folly of pressing upon the patient articles, the previous withdrawal of which they had seen to be so directly followed by the subsidence of inflammatory action. I insisted on the same course as before being at once adopted—the substitution of milk for brandy and of beef-tea for port wine. I further saw, that as the patient was even worse than when I first visited her, I must watch her case more closely. I was, therefore, more frequent in my attendance. She rallied, but this time it was slowly; nevertheless, her progress was almost uninterrupted; so that at the end of eight weeks she was once more thoroughly restored to health, and in the course of a few months, by the aid of baths and frictions, she completely regained the use of the limb which she was so near losing.

This case shows—

1st. That alcohol has a tendency to excite inflammatory action. We have seen this proved crucially. The inflammation was increased whilst wine, &c., was being given; it declined rapidly when the alcohol was withdrawn; it recurred when the use of wine was resumed; it again declined when wine was prohibited.

2nd. The administration of the wine aided in keeping up the disease, not only by poisoning and deteriorating the blood, but by destroying the desire for food. The patient had been urged to take beef-tea, &c., before I was called in, but she manifested an utter aversion to food of every kind. Soon after the stoppage of the wine, however, she not only began to take a fair

supply of milk, beef-tea, &c., but to relish it. When the wine was resumed, her appetite gradually declined, disgust for food returned; when it was once more banished, she once more was induced to take food, and soon began to crave for it.

3rd. I would remark on the extraordinary extent to which the minds of all concerned were dominated by the belief in the invigorating properties of brandy and port wine. Although they saw that the poor girl was snatched from the grave when the wine was given up, their old faith was not shaken; although the disease returned *pari passu* with the return to the use of wine, there was no disposition manifested to leave it off, until I insisted on it when again called to see the case.

Lastly. There is every reason to believe that if the administration of alcohol had been persisted in, the patient must have continued to endure agonizing pain, until she had either lost her leg by amputation, or succumbed beneath the exhausting effects of the disease.



## THE MORTALITY OF PERSONS ENGAGED IN THE LIQUOR TRAFFIC.

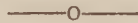
THERE is one illustration of the action of strong drink in causing premature death, which has not had sufficient attention paid to it. We refer to the mortality of persons engaged in the liquor traffic, compared with the mortality of persons engaged in innocent or useful occupations. In the supplement to the twenty-fifth Annual Report of the Registrar-General, there is a table of the mortality of persons engaged in different occupations. The following extracts from that table give the annual mortality per cent. of males at different ages:—

DEATHS PER CENT.	AGES.	AGES.	AGES.	AGES.
	25 to 35	35 to 45	45 to 55	55 to 65
Farmers and Graziers .....	·877	1·244	2·307	5·750
Grocers .....	·928	1·280	2·053	4·334
Carpenters .....	·980	1·542	2·803	6·951
Shoemakers .....	1·113	1·577	3·024	6·911
Labourers .....	·997	1·398	2·617	5·949
Inn and Hotel-keepers, Publicans, and Beer-sellers .....	1·881	2·810	4·104	7·242
Inn and Hotel-keepers, Publicans, Beer-sellers, and Wine and Spirit Merchants .....	1·912	2·793	4·105	7·446
All England .....	1·228	1·767	3·110	6·225

It will be seen from the preceding table that the mortality of persons in the liquor traffic, from twenty-five years of age to forty-five, is twice as great as it is with farmers or graziers, and more at all ages than it is with farmers, grocers, carpenters, shoemakers, labourers, and the males of all England. It appears from these statistics that the traffic in strong drink is dangerous to those engaged in it, as well as to the consumers of the drink. As there are licensed Victuallers' Protection Societies in various parts of the kingdom, we commend these statistics to their notice. It certainly is a serious question as to how this waste of life is brought about. Is it owing to the bad hours kept by publicans, as their houses are kept open long after respectable places of business have been closed? Or is it owing to working on Sundays in opposition to science and religion, for both teach the importance of a day of rest? Or is it the result of the dangerous nature of the articles in which they deal? At any rate, it is clear that persons engaged in the traffic are exposed to great risk, and that it is not incurred in works of necessity or mercy.



## Miscellaneous Communications.



### BREAKFAST TO MEMBERS OF THE BRITISH MEDICAL ASSOCIATION.

IN connection with the Annual Meeting of the British Medical Association, held at Leeds, Mr. E. Baines, M.P., one of the Vice-Presidents of the National Temperance League, invited the member to breakfast on Thursday morning, 29th July, at the Great Northern Station Hotel, to meet Mr. Samuel Bowly, President, and the Rev. Alex. Hannay, a Vice-President of the League. About 150 responded to the invitation. Several influential gentlemen belonging to the town were also present, including the Mayor of Leeds. After breakfast

Mr. BAINES, M.P., who occupied the chair, said:—Allow me, in the first place, to thank you for the honour you have done me and my colleagues in accepting the invitation we gave you

to be present this morning. It gives me, as an old Leeds man, pleasure and pride to see an assemblage like that of the British Medical Association gathered within our town. That is an association formed for the noblest purposes, containing many of our ablest men, and which is perpetually aiming at one of the grandest objects—namely, the advancement of medical science and the healing art, and thereby contributing to the well-being of mankind. We, the members of the Temperance Society, consider ourselves as your humble, and, I may say, your somewhat powerful auxiliaries. (Cheers.) We believe that you, as men devoted to the medical science and art, are those who *ex officio* — diplomatically, as I may

venture to say—are bound to be the defenders of life and health—(cheers, and “Hear, hear”)—and we, the members of the Temperance Society, believe that we are your allies in that great object. (Hear, hear.) You fight against the same enemies we fight against. You seek to advance the same good objects we seek to advance—and I believe there is not a medical man who will not be ready to confess that in temperance he finds a more powerful auxiliary than in the *materia medica*, and all the instruments of the surgeon. (Applause.) We want to ask your advice, your help; we want to apply for your aid against those things which are the chief enemies of all great communities. In this community into which you come—if you could be ubiquitous and visit all the recesses of a town like this, you would see such an amount of vice, misery, and degradation as would wring your hearts. You have devoted your time and lives to the alleviation of the sufferings of your fellow-men; and you must have found that there exists an amount of suffering, of degradation, of misery, and of consequent crime in these large communities which perhaps might appal those who are the most experienced among you. Well, we are deeply conscious of the existence of these things in the world, and the attention of mankind has lately been much devoted to them. You, in your meetings, devote your time to the sanitary condition of towns. You have medical officers employed in towns, but if you could employ dozens of them, they would not be as efficient as the temperance movement is to check disease, to cleanse the habitations of the poor, to save the lives and hearts and happiness of women and children, and to keep men in the paths of virtue. (Cheers.) That is what we are doing, and we want to have your hearty sympathy with us in preventing the mischief that surrounds us. The extent and depth of the evil, I need not say, no men know so well as medical men. They are behind the scenes; behind the domestic veil, and see all those things which wring and

break the hearts of men and women, and impoverish children, and bring families to wreck and ruin; and you know what is the invidious, malignant, and ubiquitous foe, which is doing all the mischief. Therefore, I need not tell you what it is we have to cope with, but we want to appeal to you for aid. It sometimes happens that communities, even enlightened communities, remain for a long time ignorant of the evils which exist among them. It may be doubted whether there is now a much larger proportion of drinking than at any former period; but the fact may only be that we are more aware of it. At the beginning of this century we had a most deplorable amount of popular ignorance in this country, and even now we are but half educated; but we have become aware of the state of things, and as the light beams upon us, it shows the dark places, and reveals the mischief, the nuisances, and the evils which are among us. So we are now aware of the evils of intemperance, and when we are aware of them, I think it appears clear that we have a duty and responsibility which we had not before. (Hear, hear.) We know that medical men have immense power in this question of temperance or intemperance, in determining the course of the lives of multitudes of the population. They see men and women—young men and young women—in circumstances so critical that they know that just according to the advice which their patients take will be the course of their future lives, for health or sickness; for honour or dishonour; for prolonged life or an early grave. (Applause.) Well, we want to appeal to you, that to the utmost of your power you shall exert that immense influence which you have, to give right, faithful, and even bold advice. I know it is sometimes a sacrifice and a self-denial. A man does not like to speak painful truth. He does not like to interfere in delicate matters, although often it would save life if he would do so. We want to ask you to do so. We want you to put your patients as much as possible on their

guard against the immensely seductive temptations of intoxicating liquors. Too much, perhaps, it has been the custom in private practice—in hospitals and in workhouses—to administer largely of stimulants. We want you to consider how far you can properly, safely, conscientiously diminish, or altogether withdraw, these stimulants. There is such an amount of evidence upon this point, that if you will lend your minds to the study of it, I think many medical men would more frequently and peremptorily forbid the use of stimulants than they do at present. I believe, indeed, medical men know this truth perfectly well, but there are things which may not impress themselves so strongly upon our minds and consciences as they ought to do; and, therefore, we want to tell you that almost the whole nation seems alive to the immense importance of this question; and I appeal to you as far as possible to cut off the flow of that poison which is being injected into the veins of our social system, and producing all manner of malignant diseases. It is not merely the temperance men who are alive to this, though their numbers now amount to hundreds of thousands; it is not merely philanthropists who are now taking up this question. I hold in my hand a singular proof of the attention which is now being paid to it. It is a report of the Convocation of the Clergy of the Province of Canterbury, a most interesting and valuable document, which last week was sent by the Archbishop of Canterbury to her Majesty the Queen for her perusal. I think that document is of the greatest importance, containing an amount of evidence collected in that vast province of Canterbury, from medical men, from chaplains of prisons and workhouses, from governors of workhouses, and governors of gaols, and from the working clergy. Just let me read one single sentence as to the national results and those convictions which the clergy of the province of Canterbury have expressed to the Queen and to the whole country as to intemperance:—"The results of intemperance, as portrayed in the

evidence before your committee, are of the most appalling description. To this cause may be traced many of the crimes and miseries which disturb the peace of states, and poison the happiness of families; while it depraves the character, impairs the strength, shatters the health and nerves, and brings thousands to an early death. It is found to fill our prisons, our workhouses, our lunatic asylums, and penitentiaries, and—more than any other cause or complication of causes—to frustrate the efforts and baffle the hopes of all who have at heart the elevation and welfare of our people." Well, I believe that will be endorsed by all clergymen, by all ministers of religion, by all magistrates, and by all interested in the moral and social welfare of the people. Let me add that this report asserts that there are no less than 75 per cent. of the inhabitants of our workhouses who are brought there, directly or indirectly, as the result of the vice of intemperance; a great proportion of the inmates of our asylums and of our prisons are also brought there by the same cause. The report contains an estimate that 50,000 lives are lost in England every year by accident, by disease, and by crime, the results of intemperance. (Hear, hear.) May I trespass so far upon your indulgence and forbearance as to read a paragraph relative to medical men; and do not be startled if it seems to convey a reflection upon the profession. It says:—"Nor can it be doubted that the health of our country largely suffers from the indiscriminate manner in which alcoholic drinks are prescribed by many members of the medical profession, not merely to those who may be considered in need of stimulants, but as a regular article of diet; and thus the foundation is laid in some instances for indulgence in what science has shown to be not merely unnecessary as an article of food, but often positively injurious to the human frame; and, this, notwithstanding that it is now a matter of debate among eminent practitioners whether alcohol ought to be administered as a medicine. It is a pregnant fact connected with this

subject that the governors of prisons and the masters of workhouses throughout the country testify, almost without exception, to the great and remarkable improvement in health in the case of those under their care who are necessarily debarred from drink." I do not know whether it is sufficiently dwelt upon by medical men or not, that by far the greater proportion of the world's population, the Mussulman nations from the Ganges to the Atlantic, and extending across Asia to Africa, have for 1,200 years dispensed with alcoholic drinks; and in that population there are some of the finest races in the world—the Coolies of India and China, the Afghans, the Persians, the Moors, and who are among the most vigorous and beautiful nations on the face of the earth. (Hear, hear.) I do not know whether every gentleman here is aware of the certificate signed by Sir Astley Cooper and some 2,000 medical men some years ago. As it contains very important propositions, I will read it:—"We, the undersigned, are of opinion—1. That a very large proportion of human misery, including poverty, disease, and crime, is induced by the use of alcoholic or fermented liquors as beverages. 2. That the most perfect health is compatible with total abstinence from all intoxicating beverages, whether in the form of ardent spirits, or as wine, beer, ale, porter, cider, &c. 3. That persons accustomed to such drinks may with perfect safety discontinue them entirely, either at once, or gradually, after a short time. 4. That total and universal abstinence from alcoholic beverages of all sorts would greatly conduce to the health, the prosperity, the morality, and the happiness of the human race." That was published seventeen years ago. I myself a long time ago, for the sake of influencing some men who I saw were rapidly going down hill to destruction, determined to put myself in the position to give them unsuspected advice. I said, I will abstain for a month and see how it answers with me; and finding it did answer, I went on for another month, and then for another. At the expiration of fifteen years subsequently I thought it my duty to

testify that, during the whole of that period, I had enjoyed the best health, good spirits, and a great capacity for work; and now, seventeen years later, and after thirty-two years of abstinence from intoxicating drink, I confirm the same thing to you all. ("Hear, hear," and cheers.) I testify before all this company that scarcely any man can have had more uniform, vigorous health than I have had, and for which I am deeply thankful, during the whole of the period I have named, and I have been a tolerably hard worker, too. ("Hear, hear," and cheers.) And when I tell you that I went to bed about four o'clock on the morning before last, coming out of the House of Commons after a great many hours sitting there, you will see that we have a good deal of hard work there; but I verily believe that I have been able to do more than I should have been able to do if I had not been a total abstainer. ("Hear, hear," and cheers.) And what is more, I believe I have enjoyed my food more, and had more pleasure and relish of my palate and stomach than if I had taken ever so much, or ever so little, of the choicest and most delicate wines. (Hear, hear.) That is my humble testimony to you, who learn from the facts supplied by experience. (Hear.) It might be of some use if you, on seeing some fine young fellow whom you may see for the first time under the influence of liquor—a young man, perhaps, of fine talents, of excellent constitution, brilliant prospects, and high hopes, and surrounded by most endeared relatives—it might enable you the more confidently to say to him, "There is a fatal course and there is a safe course, and we know instances of men who have had happy, long, and useful lives who have entirely abstained, and you must remember that this is the turning-point, the crisis of your history." (Hear, hear.) It is for the purpose of making to you, gentlemen, such an appeal as I have now humbly made, that we have asked you to come here this morning: and we shall consider you as doing us great honour, and as being benefactors to your species, if you

will, as far as possible, act upon the results of your observations with regard to this important matter, and thus become, in a still higher sense than at present, the blessing and pride of your country. ("Hear, hear," and cheers.)

Mr. SAMUEL BOWLY, President of the League, was received with applause. He said:—I rise under a feeling of deep responsibility, inasmuch as I cannot but feel how great is the amount of influence I see before me, either for good or evil, with regard to the question with which I have been identified for thirty-three years. My testimony entirely corresponds with that of your excellent chairman. After thirty-three years of experience and hard work, I enjoy better health to-day than I did thirty-three years ago, although I abstained against medical advice; but it is not on that ground we have asked you here to appeal to you. It is on moral grounds. The total abstainers' society, of which I happen to be the humble president, is a society for moral suasion. We don't take up the legislative aspects of the question, there are other organisations for that purpose. Our object is to appeal to the consciences and the benevolent feelings of the community, and to induce them, if possible, to unite with us in this great work. (Hear, hear.) I joined this movement thirty-three years ago, contrary to my own interest. My brother is a brewer, and has a large brewery, and some of my relations have £50,000 invested in the same way. The working men themselves took up this question, and I followed the working men. I did not lead them. The working men of Preston began the movement, and they said then, as intelligent working men say now, that total abstinence is the only safe path for them to pursue. They had previously tried all sorts of means to keep temperate. They made resolutions, but failed to keep them; and the more intelligent men who now drink would tell you unreservedly that total abstinence is the safest course for them—that it leads to the largest amount of independence, comfort, and

happiness; and I engage that if you go into the houses of total abstainers in any town, and then into the houses of those who drink, you will see that the total abstainers have the largest amount of happiness, are men of higher character, and are in better circumstances. I look upon this as a question for the masses. Where is the line to be drawn? I don't expect my servant to adopt a higher standard of self-denial than myself. I never asked my servants to put beer out of the kitchen until I had ceased to drink wine in the parlour. (Hear, hear.) I don't think it is fair to ask men who have not the same intelligence as we have to take a higher stand-point than we do ourselves. Having been myself a total abstainer for so long, the larger portion of my servants have also been total abstainers, to their immense advantage. I shall back my gardener against any gardener in Gloucestershire for the amount of work he can get through, and with my domestic servants I can do the same. (Laughter and "Hear.") It is not on mere physical grounds I ask your assistance. It is on moral grounds. It is impossible—that is my conviction—to have these drinking customs without a fearful amount of injury arising out of them. Almost all the drunkards at the present moment were perfectly sober when I became a total abstainer. How have they become drunkards? There is not one of them who intended to become so. There is something so insidious in the use of intoxicating drink that it leads away men of the first intelligence. The intemperate men are often the most intelligent working men. The man who earns the largest wages, and ought to be the leader of his class, is often at the bottom through the influence of strong drink. I want to see how these people are to be influenced. I don't expect that an army would ever do much without its officers. I don't expect that the great mass of the people will deliver themselves from this bondage of strong drink unless they are supported by the influence and example of the educated

classes. Latterly we have had meetings with the intelligent classes. Many of our ordinary temperance meetings are not so well adapted for persons of education. A great deal of nonsense has been talked at temperance meetings, and a great many things have been said that ought not to have been said. I am not going to defend the way in which total abstinence has been advocated. I know it has tended to turn sensible men away from the question. I want you now, however, to take an intelligent and common-sense view of this question; and see if you can sympathise with us in its moral bearings. I have given up a large portion of my time to this cause, and I feel it my duty to devote the remainder of my life to it. (Hear, hear.) I am deeply anxious that you should, as far as you can, give us your sympathy and help. (Cheers.) I know some of the difficulties with which medical men have to contend. I know that it is partly the ignorance of the people themselves, and that medical men are to some extent obliged to succumb to public opinion, by which they are surrounded. I do not expect that you should come out as total abstainers in the same way that I do. Medical men would find it impossible to do so in the present state of public opinion. You, however, have to make that public opinion, and so have we. What we want is that we should labour together to change that public opinion. I have been exceedingly encouraged, not by the number of persons who have become total abstainers, but by the great change taking place in the public mind as to the use of intoxicating drink. It is within the power of medical men to do a great deal to advance the cause or to retard it. Many men who have listened to the moral bearing of this question were anxious to unite with us, and yet were afraid to do so on account of their health. I think if medical men would say, "I think you will be able to do exceedingly well without these things; if you are ill at any time they may be of service to you; and they are far more serviceable to persons who abstain than to others,"

it would greatly assist the cause. I have never laid down so dogmatical a rule that I should never take it as a medicine. If I found in an extreme case that a stimulant was necessary, I should not hesitate, under medical advice, to resort to it. But taking it as a medicine is quite a different thing from using it as a diet. When I was at Oxford, at a meeting of undergraduates and University men, the chair was taken by the junior proctor, who said that "More than one-half the punishments we have to inflict are through drink, not through drunkenness," he said, "but through drink." We know what the temptations of young men are in the vigour of youth, when their animal passions are strong. Thousands of men have been morally ruined by drink, who never were drunk. When we think how small the sacrifice, I am utterly astonished that a fortnight's inconvenience in changing a habit should stand between us and one of the greatest movements of our day. I am astonished that educated men and religious men should allow a mere article of diet to stand in the way of the removal of this great evil. I believe that the majority of those who have abstained have enjoyed higher moral and intellectual life, as our chairman has done. I know of no men who can do the amount of work the total abstainers can; and I believe that you medical men know it. (Hear, hear.) I don't expect you to do more than you can; but there are many instances in which you can, consistently with your professional position, and in accordance with your own convictions, do us a great amount of service. I do feel it my privilege—and it is a high privilege—to see such a meeting before me, and to be able to appeal to men of your influence to come and help us and your country in this great and good work. (Applause.)

The Rev. ALEXANDER HANNAY, Vice-President of the League, was next called upon by the chairman. He said:—It seems to me that the statement of the case on our side is so complete that it would be better, if there are any gentlemen in the meet-

ing who object to the course which we as total abstainers take, if they would favour us with a brief statement of their objections. I could easily stand up to meet certain objections which I know to be current amongst educated people, but I should not know whether in doing so I was discussing the objections held by some of you. Our object is simply to arrive at the truth, and to ascertain what is our duty towards this great British community in which we live. (Hear, hear.) I believe that some of the gentlemen present are not total abstainers—(laughter)—and I also believe that they have reasons for the position which they maintain in regard to this matter. It is not outside the bounds of possibility, notwithstanding the declarations of our Chairman and Mr. Bowly, that you might say something which would modify their action and advocacy. Now we all have the interest of the community at heart, and we want you to tell us what it is that stands between you and us on this question. I am sure that the impressive addresses which have been delivered must have led you to feel the matter to be one which we are bound to look at as Christians and as citizens, and that we ought to do our best with reference to it—(hear, hear)—and I therefore leave the matter in this shape, trusting that any one who has any objection to urge will freely and fully state them. (Hear, hear.)

The CHAIRMAN: I very heartily second the proposition of our rev. friend, who has shown himself to be a total abstainer by totally abstaining from making a speech. (Laughter.) We should be very sorry to make this a polemical occasion, but if there are any gentlemen present conscientiously holding objections, we should be glad if they would state them. I now invite such statements for a short time, and suggest that any remarks that may be made may be compressed as much as possible. (Hear, hear.)

Dr. STEWART, of Dublin, whose remarks were very impatiently listened to, and who was consequently very imperfectly heard, in the course of his speech said that he believed alcohol

was too generally prescribed by the profession, and that he did not use alcohol as a beverage himself, although he allowed it occasionally for good fellowship. (Laughter.) Dr. Stewart proceeded:—The reason I address you, my brethren, is that for a great many years I occupied an important situation under Government, as the governor of a lunatic asylum containing about 700 beds and 400 or 500 lunatics, of whom I had the general care and the general inspection. For about ten years I held the situation. At the end of ten years my situation was abolished, and affairs were conducted by a board and not by an individual; but at the time 100 of the lunatics which were under my care were obliged to be supported by Government, and the Government proposed that there should be a contract for them. (Cries of "Question.") I was waited upon by a deputation of matrons and officials, who urged upon me to contract with Government for the maintenance of these lunatics. (Renewed cries of "Question.") The contract was given to me, and I had the care of the asylum for about twelve years. Dr. Fox heard that I had contracted with the Government for a very small sum and that I would be wronged by it because I could not afford to keep the lunatics for the money I obtained. I told him, however, that I acted upon the temperance principle, and that I could not only keep the lunatics, but could make money by the contract; and I am happy to say I have made money by it. (Applause.)

Dr. LANGDOWN DOWN, of London Hospital:—Whilst believing that the gentlemen who have addressed us are actuated by the best motives that can influence humanity, I want to explain to them some of the difficulties in the matter, and perhaps I shall be explaining some of the difficulties of my colleagues here. I think none of us would say for a moment that to a healthy man alcoholic drinks are wanted at all. The indications of nature go to show this. If cows gave alcoholic milk then we should think that probably the animal required

alcohol as a drink. But the difficulties in practice consist of social difficulties with reference to ourselves, and with reference to our patients. You know the thing has grown up and is surrounded with prejudice, and in the out-patient department in my hospital the question that arises is, "What shall I drink?" (Hear, hear.) Drink is the whole idea. Well, what can they drink? That is the difficulty. We have had described to us in very eloquent terms at one of our meetings what the water of our towns is, and I believe the best thing the temperance movement could be directed to is the improvement of the water supply of our towns. ("Hear, hear," and applause.) If I go to a railway-station—I do not drink beer myself—I cannot get anything to drink at all. I can get tea or coffee, but the tea and coffee are never ready, and when they bring it, they bring it made with the bad water of the towns, and I am done for at once. Now, this, gentlemen, is practically the great difficulty with reference to our duties to the public at large. (Hear, hear.) Then with reference to our social assemblies, when we meet together at gatherings, we get wine put before us; and I should be ashamed to say how much wine we have consumed already. (Great laughter.) These are the difficulties. We are not prejudiced as a profession against this temperance movement, but we are met on every hand by difficulties of this kind. With regard to our hospital management, I think a meeting like this can do an immense amount of good. Patients like alcoholic drink, and competition in diet prevails in some measure in meeting the wishes of the patients. I go round the wards of the hospital, and some patients grumble if I do not put them upon the same fancy diet, with extras, that is given to other people. Difficulties of this nature might be removed by a meeting like this.

Mr. EBENEZER DAVIES, M.R.C.S., L.S.A., Swansea, said:—I cannot help saying a few words; in the first place, to express great pleasure at the two first speeches we heard, and to say that if the temperance cause was

always advocated with the ability and the temperance—(hear, hear)—that it has been this morning, medical men would not so often be driven into a state of polarity, so to speak, in opposition to it. (Hear, hear.) I rise also to mention a difficulty that prevails, not so much amongst our own class as amongst the working classes, with regard to the adoption of temperance principles. One of the great difficulties that they have to encounter—and it is one that meets them at every step—is this, that often working men find they have no place to go to spend their wages but the public-house. Now, as a rule, men become intemperate during the period of their single life. Most single working men live in lodgings, and they are relieved from their duties at an early hour in the evening. If they then come home to stay at their lodgings they are in the way. In the house in which they lodge there is probably a family, and the mother of the children does not want to see two or three single men about the house interfering with her occupations. These men are not expected home before ten o'clock, and if they come home before this hour they are more an annoyance—or they are felt to be more an annoyance—than otherwise. I think, therefore, that it would be an advantage if the friends of the temperance movement would devote their time and energies to some extent towards organising some scheme for providing wholesome and pleasant recreation for workingmen in the evenings. (Hear, hear.) At present, many of them are from the circumstances of the case driven to the public-houses, where they find pleasant company, cheerful rooms, and can spend their evenings without being in the way of anybody. (Hear, hear.) No one who has had the experience I have had, either in the matter of public health or of private practice, but must see that we are paralysed at every step by the drinking habits of our countrymen. (Hear, hear.)

Mr. BOWLY:—I think our friend will be glad to know that in this very town there are two self-supporting public-houses "without the drink." One is called "The British Workman," which

I visited yesterday. The second, like the first, is going on well, and a third is about to be opened. I hope this movement will go on until there are a larger number of public-houses without the drink than with it. (Cheers.) With regard to amusement, I think it will be found that total abstainers have already done much. The matter presses very heavily upon us, both in purse and time, and I hope our friends who are moderate drinkers, but are anxious to put down drunkenness, will at any rate assist us in our efforts to provide amusement for the people, and to open such houses as those to which I have alluded. (Hear, hear.)

The Rev. D. BELL, M.D., C.M., Goole, said:—As a medical man who practised for seventeen years, and who for some years before that was a medical student, I had great opportunities, you will admit, of judging of the importance of temperance; and as a clergyman now of nearly twenty years' standing, I have followed up the deep interest I have always taken in the temperance system. I should therefore think it wrong, if I did not this morning stand up and say, that I am delighted with the introductory speeches, and that I am ready to continue—not to begin, because I have done it all my life—to assist the efforts of those gentlemen to the utmost of my power. (Hear, hear.) As a clergyman having a parish containing 7,000 inhabitants—a population of a somewhat peculiar character—I can assure you one of the greatest obstacles I have to contend with is intemperance, or intoxication, or drunkenness, call it by what name you choose. I have frequently said to my parishioners—because they earn very good wages and are not at all badly off—that if they would bring to me all they take to the beer and gin-shops when they are full of work, I would take care of them when they were out of work. (Hear, hear.) I believe that if temperance were carried out in my parish there would be no want whatever. There would be far fewer people, I am satisfied, in the workhouse, and the overlook of my parish would then become, instead of heavy, hard, onerous,

painful work, a pleasure and an enjoyment. (Applause.) I was connected with a temperance society in the county town of Cumberland. The good fruits that flowed from it I shall never forget, and therefore, and for other reasons, I shall never cease to advocate temperance. (Applause.)

Dr. C. J. HARE, London (whom the chairman heartily welcomed on his visit to his native town), said:—I think we cannot leave this room without expressing, as I am sure we shall do most heartily, our thanks to you, Mr. Baines, and the President of the League, for having given us the opportunity of meeting together on this occasion. (Hear, hear.) I had the honour of receiving an invitation to this meeting before I left London, and I can assure you it was matter of considerable doubt to myself whether I should accept or decline the invitation. I doubted for this reason only—that I think those who attend public meetings by invitation do to a certain extent endorse the opinions that are expressed there; and how in this case extreme, or not extreme, the opinions to be uttered might be, I could not of course venture to surmise. I venture now to say that I have thus far heard nothing expressed which, as a physician who has had no small amount of experience in hospitals and elsewhere, I cannot most thoroughly endorse. (Hear, hear.) No one can know better than medical men the amount, the irreparable amount, of mischief produced by the consumption of alcoholic drinks. I am not a teetotaler myself—I am nearly so; but I must say that the amount of work that those who abstain can do is not only equal to, but often much greater than, that which can be performed by those who take a large amount of alcoholic fluid. They not only do more work, but they sustain work better. (Hear, hear.) Then, again, I may state here boldly and distinctly what I have stated elsewhere, what I have said to students, and what I shall always state as long as need be—that at the present time the tendency and practice of medicine are far too much of a stimulating character. (Hear, hear.)

I state this advisedly, because I have treated, and many times treat, diseases in which stimulants have been considered essential. I have treated those diseases satisfactorily with as much success—or with more success, I may venture to state distinctly—as those who treat them with alcoholic fluids. (Hear, hear.) At the same time, I should not be allowed to practise my profession if, under certain circumstances, I must not be allowed to give stimulants. I have no more right to give up the use of stimulants as a practitioner than I have to give up the use of any other drug—(hear, hear)—because I venture to state distinctly, that there are conditions of the system in which alcoholic stimulants are absolutely necessary—(hear, hear)—and I could not treat a man as a patient if he did not allow me under certain circumstances to give him stimulants. At the same time, because they have been found useful and essential under certain circumstances, the exception has come to be made the rule, and in a vast number of cases, as I have already stated, stimulants are given when they are quite unnecessary. (Hear, hear.) But, Sir, the danger is not there. The danger is not so much in giving stimulants in even large quantities in certain cases of disease, but in telling patients when they feel a little weak that they had better take a glass of wine. (Hear, hear.) I am quite sure, and I state it advisedly, that medical men are not without a considerable degree of responsibility in introducing into the midst of many families what results in a very large amount of mischief and injury, because although there are some who have the moral courage to abstain when they think necessary, there are others who have not that power. (Hear, hear.) And especially—and I mention this as an undoubted fact—especially is it with the other sex that the danger lies. (Hear, hear.) In every rank of society where alcoholic fluids are taken by the wife, they are often taken without the husband's knowledge, and in the end such misery is introduced as I could not

picture. I know it, but language would fail me if I attempted to describe the misery that indulgence in drink on the part of a woman produces in a home. The woman, or the lady—it does not matter which—is never happy unless she has got the brandy-bottle near her, and if she cannot have it near her she will invent an excuse to get to it. She will rise from the dinner-table to get her pocket-handkerchief or her fan, and she will go instead to her bedroom, or some other place where she can quietly have the stimulant she is thirsting for. She will steal the key of the wine-cellar, and her husband will find—it may be months afterwards—that the wine has disappeared, and he little knows how it has disappeared. (Hear, hear.) I do not blame the medical profession for all this, but I do know, as a positive fact, that the beginning of some of these cases has been with the medical man advising, “Well, if you do feel a little below par, you will find a glass of wine will do you good.” I have already stated my thorough conviction in favour of the use of alcoholic stimulants under certain circumstances, but balancing the good and the evil together, I will undertake to say distinctly, that if all the alcoholic fluids of the United Kingdom were at the bottom of the Atlantic, we should be a vast deal better off. (Loud cheers.)

Dr. FROBISHER, Leeds :—As having been resident for some years in Leeds, I have really thought it my duty to detain you for one moment—in the first place, to thank you, Mr. Chairman, for your very kind invitation to myself and others to consult together upon a subject so truly important and praiseworthy. My conviction has been for several years that alcoholic drinks are not needful to any of us in a state of health. (Hear, hear.) If alcohol were needful in a state of health, that Great Giver of all good would have put its constituent parts in the water we drink. (Hear, hear.) According to the usage of our country, alcoholic drinks have become a luxury, and it is on account of this that great numbers of people take them, well

aware of the terrible consequences of giving way to any excess with them. But they say, "You must also be aware that alcohol is the only thing we know of at present to extract from a great many of our roots and herbs, and that shows we could not do without alcohol"; but it therefore seems to me that the proper place for alcohol is with the chemist or the physician. (Hear, hear.) In the event of disease, there are cases where stimulants are beneficial, and I agree therefore with the gentleman who has sat down, when he said he was perfectly convinced that there are cases where they are needful. I was exceedingly pleased with the moderate manner in which one of the gentlemen who preceded me spoke, when he said that temperance meetings had sometimes done a deal of harm, and that he himself, though first in the movement for temperance, would under particular circumstances and under proper advice take stimulants. But except under particular circumstances I am convinced that alcoholic drinks are not needful, and when we see the deplorable and frightful consequences of intemperance, no Christian medical man but must—as many of them have done for years, I believe—turn his attention to the great object of bringing about a better state of things, knowing that drunkenness is a great crime in the country, and the handmaid of everything that is wicked and deplorable. (Cheers.)

The Rev. Mr. HANNAY:—I believe we have done more towards furthering the influence of this meeting, by calling forth statements such as have been made to you by the medical gentlemen who have spoken, than by any arguments that I and others could submit to you. I wish that as medical men, in some of your professional gatherings, such as you have at Leeds this week, you could discuss as medical men the question we have had before us this morning, and give forth your testimony to the country. (Hear, hear.) I am persuaded that it would prove an era in the delivery of Britain from drunkenness, if we could get the medical men with us. Everywhere

you are pleaded—not always honestly I believe—as a reason for not adopting total abstinence. "Our doctor says so and so," is the cry; "we need this and that." I am quite aware the patient very often goes to the doctor with a leading question, and asks whether he does not think a little wine would do him good, and it is to expect from medical men, I think, more than we have any right to expect, to ask that they should take their stand upon some abstract doctrine of total abstinence in such circumstances. (Hear, hear.) But apart from your individual practice, if you could in your professional gatherings give forth testimony to the country, in the sense in which you have testified this morning against the use of intoxicating drinks as beverages, you would give to the temperance movement, and with it to the morality and well-being of the country, a generation's lift. (Cheers.) The whole work of a generation would be done in a testimony like that, and I venture to submit to your consideration whether this might not be done in your county gatherings as well as at your national gatherings such as the one you have here in Leeds at this time. (Hear, hear.) I shall not detain you longer, except to remark that I wish Dr. Stewart had not spoken in favour of the "good fellowship" of alcohol, while, at the same time, saying he ignored the thing as an ordinary beverage. (Hear, hear.) Why, good fellowship, my friends, has been the ruin of thousands and tens of thousands in this country; it is the good fellowship, as it is called, that leads away our young men; and the example of a venerable man like Dr. Stewart, yielding on such a point, when he knows that many are ruined in that way, strikes me as being very sad. (Hear, hear.) As Dr. Stewart was frank, I shall be frank. I do think we must consider our influence upon those who are about us in a matter of this kind, and when, firmly believing, as we all seem to do, that these drinks are not needful as beverages, and that, as beverages, they are polluting the springs of life throughout the nation, let us take a firm

stand and say that, as beverages, we shall have nothing to do with them. (Applause.) If the medical profession will but go with us in this, I venture to say that it will be found in the next five or ten years that we have almost revolutionised Britain in the matter of abstinence from intoxicating drinks. (Cheers.)

Dr. STEWART was understood to explain that, although he had made use of the expression attributed to him, he perfectly agreed that alcohol in every form ought not to be used except as a medicine.

Dr. BEALES (Mayor of Congleton, Cheshire):—The only question that seems to arise in my mind is this—that when we are so well agreed, how is it we are not in the same boat? I think there are two great obstacles that I am sorry to say lie in the way of our profession. One is a deficiency of moral courage, and the other is selfishness. The moral courage that is required is this—that when a patient comes to you feeling weak, you shall not recommend stimulants if they are not good for him, although he may want them. Now, if you recommend to that patient that he should drink nothing but tea, or water, or milk, he will go home and complain; and he is told, it may be by his wife, “Oh, you will sink under such treatment. You must go to another man.” (A voice: “Perfectly true.”) This being the case, we have occasionally in self-preservation, and against our consciences, sometimes to say, “You must take a glass of wine once or twice in the day.” I had the honour of being a pupil of John Higginbottom. (Hear, hear.) I lived with him six years, and in the formation of my character I was very much indebted to him for the excellent example that he set me. I, like others, have fallen into the habit of moderation, but I believe I should have been just as well if I had firmly resisted. John Higginbottom is now in his eighty-third year. Only a few days ago I had a letter from him, written with a hand as firm as my own. Well, he has suffered as men must more or less suffer who work hard in a good cause, and they

must not look for their reward here. He has suffered materially, for instead of being as he should have been, the richest practitioner in the district in which he resides, he is—I will not say a poor one—but I will say, that his advocacy of temperance has been some thousands of pounds out of his pocket. (Hear, hear.) In his old age his vivacity is wonderful, and he spends his leisure hours experiencing all the enjoyment that they afforded him some thirty or forty years ago. (Applause.)

Dr. MARTIN, Warrington:—The point which Dr. Beales referred to at the outset is a very important one; but what soldier would he be who feared to face an enemy because thereby he might suffer loss? And I ask what enemy is there in this country so terrible as the enemy alcohol? We, I believe, are more responsible with regard to this matter of intemperance than any other class of the community, and I feel personally deeply obliged to you, Mr. Chairman, for having convened the members of the Medical Association together on an occasion of this kind, to take counsel on this matter, and to compare notes. I believe the effect of a meeting of this kind will be to nerve us more than ever to do our duty towards our profession and the country we so much love. (Applause.) Dr. Down mentioned one matter which struck me very much—I mean as to water as an antidote to intemperance. I would remind him that the three towns of this country that have the best water supply—Glasgow, Liverpool and Manchester—are the most drunken towns in the country. This is a sad fact. I am heartily in favour of working as a social reformer, and will do all I possibly can, and I am willing to incur some little odium in the town in which I reside, in doing it, to urge the importance of sanitary reform. But my experience is this—that, do what we will as sanitary reformers, the stone that we push up hill will ever and anon come rolling down upon us. (Hear, hear.) Until we diminish intemperance among the working

classes, we cannot hope for much from sanitary agencies. Here is this extraordinary fact. At the end of thirty years of sanitary labour, instead of the death-rate being diminished, it is higher than it was when sanitary reform was what we may call introduced. (Cries of "No.") It is so, and the question is therefore a very important one to medical men. Every medical man is most conscientious and careful in administering certain articles which he knows will have a certain insidious fascinating effect upon those to whom he recommends them. Every medical man is most scrupulous in recommending an article like opium. If he administers it, he keeps the fact as far as he can from the knowledge of his patient, simply because he knows that there is just this danger, that in proportion to the benefit a patient receives from the article administered, will be the estimation in which that article will be held, and the danger that the patient will recur to it when any symptom of indisposition is felt by him. It is precisely so with regard to alcohol. I would, in some cases, recommend alcohol, but I would remember this, that my patient will praise the bridge that carries him safely over; and we know that in too many instances, a patient recurs to the use of that as a beverage which was recommended to him as a medicine. (Hear, hear.) If medical men would only be consistent, and exercise the same scrupulous care in the administration of alcohol that they do in the administration of opium, depend upon it there would be far less intemperance in the country. (Cheers.)

Dr. HARE said that notwithstanding what had been said about three of the largest towns in the kingdom, nothing was more clearly established than that at Gloucester, Salisbury, Leicester, and some other places where the supply and quality of water were improved, the percentage of death had considerably diminished.

Dr. MARTIN:—I am ready to admit that; but thirty years ago we had no sanitary regulations, so to speak, and the death-rate at this moment is

higher in proportion to the population than it was then. Dr. Farre will tell you that the death-rate is higher by 1 per 1,000 at this moment than it was thirty years ago. What a sad state of things does that fact bespeak! a death-rate 1 per 1,000 higher than it was thirty years ago before our sanitary revolution!

Mr. W. F. TEEVAN, B.A., F.R.C.S., said it could not be wondered at that drunkenness prevailed so extensively, when in London, for instance, the shops which supplied articles necessary for life were not nearly so numerous as public-houses; and proceeded: The question we come to is, How is this state of things to be remedied? I am afraid the people object to stringent legislative powers, but surely something else may be done without much trouble. When in Paris at one time I met a gentleman who said to me, "I was over in your country, and it struck me that it was all very well to talk about drunkenness, but what are the people to do? You positively force them into it. In London I knew scarcely any one, and on Sundays, if the day was fine I amused myself in the parks. If the day was wet I could not do this, and I was obliged, after getting up and looking at the weather, to go back to bed and sleep till Monday morning, so as to be out of harm." (Laughter.) But few people would be inclined to adopt such a plan of keeping out of temptation, and the consequence is that many London working men—and the working men of other places—fall into the public-houses on Sundays because they have nowhere else to go. (Hear, hear.)

Mr. H. NORRISS, L.R.C.P., Pether-ton, called attention to the fact that there are many districts in the southern counties in which the agricultural labourer is partly paid in cider, and this he said was an evil against which a medical man is almost powerless. He, however, endorsed everything that had been said in favour of medical men exercising their influence in favour of abstinence wherever they could do so.

Mr. BOWLY:—With regard to the

agricultural labourer, I think it will be found that where the farmer is or has become a total abstainer he has been able to carry out total abstinence amongst his men. But these men are generally led by example. They see people above them drinking their wine, and argue that if stimulants be necessary for them they are the more necessary in their case, who have so much hard work to go through. I am afraid we cannot expect the masses to move first, but if we could get the well-informed amongst a community to adopt temperance principles, I am convinced those in a lower scale would be the more easily induced to take the same course. I merely rose to suggest whether Dr. Hare could not bring the subject before some of the meetings of the medical associations in some paper which could be read before the physiological or some other section, and so be made a matter of discussion. (Hear, hear.) I must say that I have been very deeply impressed with the sentiments I have heard this morning from medical men; and if these sentiments were urged upon their professional brethren, I believe they would prove a great power for good. What would not go down seven years ago would be accepted now. I am quite sure a change has come over the public mind, and that it requires less effort to press this question than it did a few years ago. I am extremely grateful on behalf of the League, to those gentlemen who have given us their attendance. This morning's meeting will give an impetus to the work before us, for which we will be long and truly grateful. (Applause.)

The CHAIRMAN:—With regard to this matter of paying wages in cider, I have heard the same statement made by gentlemen from Devonshire and other parts of the West of England. I have a bailiff in Lancashire who has been fifty years a total abstainer, and I asked him once whether he found it necessary to give workmen beer in time of harvest. He said, "Yes, if you pay for it; no, if you don't pay for it." (Laughter.) The fact is, if you pay for it they will drink any quantity, but if you don't they

will take their coffee and milk, and do their work a great deal better than they could do with beer. (Hear, hear.) May I also say that during the thirty-two years I have been a total abstainer, when at times I have been challenged to drink, and have always replied, "No, I don't take wine," never once did I receive an insult. If I said, "I do not take wine," there was an end of the matter. (Hear, hear.) Let me express my deep sense of the value of the speeches which have been made. I trust this meeting will prove to have been useful, and that it may be the more useful I heartily second the hint which Mr. Bowly has made—that some of the medical gentlemen present should assist us by bringing the matter under the attention of the Association. If they would do so I feel that a great amount of public good would be done. (Hear, hear.) I most heartily wish you, gentlemen, a good morning, and a most successful issue to this meeting of your Association. (Applause.)

Dr. MUNROE, of Hull:—There is one duty, gentlemen, which I am sure we will willingly perform, but before calling upon you to do it, I wish just to remark that the success which has attended my practice where I have not given alcohol, is what I cannot look over. (Hear, hear.) I am satisfied that this meeting will be productive of good, and I trust it will be followed up next year by a similar gathering at Newcastle, and soon, I am persuaded, we will arrive at one opinion about alcohol. In my own practice, when I order alcohol, I give it as alcohol. I don't like to send my patient to the public-house for his medicine. (Hear, hear.) I do not believe that alcohol is physic and food; if it is one, it cannot be the other. This, however, is a question we cannot go into this morning, and I trust we shall have an opportunity of going into the whole question next year at one of our sections. (Hear, hear.) I move a vote of thanks to Mr. Baines, M.P. (Applause.)

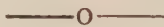
Mr. B. TOWNSON, M.R.C.S., Liverpool, seconded the motion, and after giving personal testimony as to the

benefits of total abstinence, said that as a medical officer to the Liverpool Post-office, he could testify that those letter carriers were the heartiest, the most active, and the most able to

endure fatigue who were total abstainers. (Applause.)

Mr. BAINES, M.P., having briefly acknowledged the compliment, the proceedings terminated.

[The Meeting was well reported in the Leeds newspapers, and was favourably noticed in several medical journals.]



## THE MEDICAL USE OF ALCOHOLIC DRINKS.

*A Paper read at a Conference held in the Crystal Palace, 31st August, 1869.*

*By Mr. T. A. SMITH, Lecturer on Chemistry, London.*

It may be thought that temperance advocates ought not to interfere with the medical use of alcohol, but leave that to the judgment of the medical profession. And if alcohol were used with as much care and caution as opium, arsenic, hydrocyanic acid, and other poisons, we might be content to leave the matter in the hands of the doctors. But alcohol is not used with the same discrimination as other poisons. Its dangerous character seems generally forgotten by the profession as well as by the public, and therefore the friends of temperance are justified in inquiring into the propriety of its common use in the treatment of disease. Alcohol is never employed in its pure state as a medicine, but either in the shape of the preparations of the pharmacopœia, or as wine, beer, or spirits. The alcoholic preparations of the pharmacopœia are tinctures, essences, medicated wines, spirits, &c. There are more than sixty tinctures. These are prepared either with proof spirit or with rectified spirit of wine, and they are all highly charged with alcohol. The medicated wines are made with orange wine containing about 12 per cent. of alcohol, or with sherry containing 18 per cent. of alcohol. There are twelve spirits in the pharmacopœia besides rectified spirit and proof spirit. The medicated spirits are all above proof, being prepared with rectified spirit of wine. Alcohol is also contained in essences, syrups, and liniments, so that a most ample supply of alcoholic physic is provided in the pharmacopœia; and as there are definite for-

mulæ for the preparation of the various tinctures, &c., when a medical man prescribes any of these preparations, he may have a tolerable idea of what he is prescribing. But notwithstanding the great quantity of alcoholic physic contained in the pharmacopœia sanctioned by the General Council of Medical Education and Registration of the United Kingdom, medical men prescribe the crude preparations of the wine merchant and publican, which are not prepared according to well-known rules, which vary greatly in composition, and the contents of which are generally unknown to those who prescribe them. There may be objections to the use of alcohol in any form; it is, however, from its use for medical purposes in the form of wine, beer, and spirits, that the greatest evils are likely to arise, and it is therefore to the indiscriminate prescription of intoxicating drinks that temperance reformers more especially object. There is a fashion in medicine as in other things. A few years ago it was the fashion to bleed, now it is the fashion to order intoxicating drinks. In looking over the accounts of the expenditure of our principal hospitals, I have been forcibly struck with the great amount of money expended in alcoholic liquors. In 1867 ten of our metropolitan hospitals, spent six thousand seven hundred and forty-four pounds in wine and spirits, besides a considerable sum in malt liquor. At one of the annual meetings of the Social Science Association a paper was read by John Charles Steele, M.D., on "Hospital Dietetics."

In this paper Dr. Steele says that "In the larger hospitals the wine merchant's bill occupies a position second only in amount to the butcher's and the baker's, and those associated with hospital management are fully aware that during the last few years the consumption of alcoholic stimulants has increased in a formidable ratio with the numbers of the sick treated." It is a question worth the serious consideration of the managers of hospitals whether this great consumption of alcoholic liquors is necessary or injurious. One thing is quite clear, namely, that the increased use of alcoholic drinks is not the result of a scientific investigation into their properties, for no investigation has taken place, and the problem of the physiological action of alcohol is not yet solved. It is pretty well known how alcohol can derange the functions of the body and destroy life, but no one has yet found out how it can cure. Dr. Chambers, in his work on "The Indigestions," says "the chief argument in favour of fermented liquors is the unanswerable one *that they are nice.*" It is the acquired liking for these liquors which is the chief reason for their general consumption and for the mistakes of doctors and patients as to their properties. A London hospital may be considered an alcoholic institution. Doctors, students, nurses, and patients, are nearly all believers in the virtues of alcoholic drink. They have been trained up to take it, they feel as all persons do who are in the habit of using it, a sort of necessity for it; and as a result of this they have a belief in its usefulness. It requires a strong mental effort to enable a medical man to throw off the prejudices of early training, the influence of appetite and fashion, and to take a purely scientific view of the use of alcohol. Some medical men have done this, and they try to correct the common errors respecting the medical use of alcohol. One of the powerful opponents of the indiscriminate use of alcohol, Dr. W. T. Gairdner, of Glasgow, in a paper read at the annual meeting of the British Medical Association, held at Oxford in August

last year, says: "It is as nearly as possible a demonstrated fact that much of what is spent in wines and spirits for the sick in hospitals (and therefore probably also in private practice) is unnecessarily, if not injuriously, spent." I believe that every one who has studied the properties of wines and spirits, and is not under their influence, will agree in opinion with Dr. Gairdner. At the medical conference held in May at the City Terminus Hotel, a mass of medical testimony in favour of abstinence was produced. The papers prepared for that meeting were by medical men who had thrown off the trammels of habit and fashion. They had investigated the question of the use of alcohol in the treatment of disease, and they denounced the common medical use of alcohol as being unscientific and injurious.

The greatest objection, however, to the routine prescription of alcoholic drink is not that it is unscientific, but that it is a great cause of intemperance. It upholds the popular delusions as to the virtues of strong drink; it has led many to become drunkards; and has induced many who had been reclaimed from intemperance to return to their former evil habits. It is then the duty of all who wish well to the cause of temperance to set their faces against the common and indiscriminate prescription of alcoholic liquors. Dr. Anstie, who is one of the most able of the advocates of alcoholic medication, and who has endeavoured to set up a scientific standard for the use of alcohol, does not like the doctors being called producers of drunkenness. In his article on "Alcoholism," in *Reynold's System of Medicine*, he says: "It is frequently charged upon those physicians who recommend alcoholic stimulants in disease that they are encouraging patients to indulge in one of the strongest temptations to drunkenness. This accusation is entirely unjust if applied to those who administer the remedy upon scientific principles." I should like to know how many medical men administer the alcohol upon scientific principles? Dr. Anstie has suggested the use of the

sphygmograph and chemical analysis as guides to the physician in the use of alcohol. I wonder how many regulate the prescription of alcohol by these guides? The common plan is to order wine, or beer, or spirits without any reference to the modern appliances of science. Sometimes a medical man will be guilty of the absurdity of ordering "a sound wine,"—or "well-brewed beer"—two phrases which neither doctor nor patient could probably explain. Some medical men, not content with privately promoting the use of drinks which produce drunkenness, disease, and crime, actually give testimonials to the virtues and wholesomeness of certain intoxicating drinks. These doctors are not likely to promote the administration of the remedy upon scientific principles. These testimonials are probably given out of gratitude to the wine merchants or brewers for a gratuitous supply of the liquors, or they may be given in order that the names and qualifications of the learned doctors may be made known through the puffing advertisements of the wine and malt liquor merchants. To the honour of the medical profession, I am happy to say that this form of quackery is not common. But the practice of ordering patients to take intoxicating drinks either from want of investigation into their properties, or in obedience to fashion, or merely to please patients, is, I am sorry to say, very prevalent. It is very common to hear persons say that wine and brandy must be good, or the doctors would not order them, and then, upon the strength of this idea, persons prescribe the alcoholic drink for themselves, and in many cases intemperance and other evils are produced. Intoxicating drinks are such nice medicines, that when once persons commence a course of alcoholic physic they very seldom give it up. Alcohol and other narcotics possess the power of creating such a peculiar state of the nervous system as to render their continued use almost a matter of necessity. Thus persons who habitually use opium, tobacco, or alcohol, feel a necessity for these poisons, but per-

sons who do not use these things are happily free from any desire for them. I have read somewhere of a Chinese doctor who, being about to move into a new locality, invited all his old neighbours to pay him a farewell visit, and he promised to give each of them a present. When they were all assembled, the doctor offered each of them a box of physic, but they all declined to accept the proffered medicine, on the ground that they were not sick. "Oh," said the doctor, "don't refuse on that account, for if you are not sick, if you will only take my physic, you soon will be." This is strictly the case with alcoholic physic. If persons do not feel the necessity for wine, or beer, or spirits, if they will only take them for a short time, they will so affect their nervous system as to make them feel an apparent necessity for them. In this lies the great danger connected with the use of alcoholic drinks for medical purposes. They are pleasant, fashionable, bewitching medicines, but in the end can bite like the serpent and sting like the adder. Dr. Habershon, physician to Guy's Hospital, although advocating the use of alcohol in certain cases, yet recognises the danger connected with its use. At page 109 of his work on "Diseases of the Stomach," he says:—"Great responsibility attaches to medical practitioners in their recommendation of ardent spirits in the treatment of disease; and the public are too prone to resort to them for the immediate relief of gastric symptoms and of weakness." I wish that medical men felt the responsibility connected with the prescription of alcoholic drinks. I cannot help thinking that if the fatal consequences of alcoholic medication were duly considered, the practice of advising the sick to take wine or beer would be given up, and more rational and more efficient remedies would be employed. I have a deep-rooted conviction that alcoholic liquors are never required in health, and are seldom of any service in disease. This conviction is the result of more than thirty years' careful study of the effects of alcoholic liquors in health and sickness. In support of

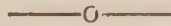
this view I might cite the discordant opinions of medical men as to the mode of action of alcohol; I might refer to the fact that many medical men have almost entirely abandoned the prescription of these liquors; and that others have greatly reduced the quantity employed, and with great advantage to their patients. I know too that those medical men who have ceased to prescribe intoxicating drinks are quite as successful (if not more so), in their treatment of disease, than the doctors who, at the risk of making drunkards, recommend alcoholic drinks. The absurdity of placing importance upon the use of strong drink in the treatment of disease, is often strikingly illustrated at hydropathic establishments, in the case of persons who have recovered their health without alcohol after having tried in vain to gain health with it. There is also another way in which the erroneous views of some medical men as to the value of strong drink is sometimes demonstrated—namely, in the case of teetotalers who have been ordered to take alcoholic drink, and have been assured they could not possibly recover without it; but, not having faith in public-house medicine, they have refused to take it, and have got well without it, whilst others, who have obeyed in similar circumstances the orders of the doctors, have remained the slaves of alcohol for the rest of their lives. Of course, the greater number of persons when ill look for intoxicating drinks, and would feel disappointed if they were deprived of them; but the case is quite different with persons who have never acquired the love of these drinks, or have abstained from their use long enough to get free from the desire from them.

The conduct of teetotalers when ill has often been the subject of comment. Some have been called weak-minded for readily obeying the order to take strong drink, and others have been called fanatics for refusing to take it. But before we question the conduct of teetotalers in reference to the medical use of alcohol, there are a few considerations worthy of notice. Under the name of teetotalers we include all

who have taken the teetotal pledge, and adhere to the practice of abstinence. These teetotalers are of both sexes, of all ages, classes, sects, parties, and occupations. Some have had the advantage of education, whilst many, from adverse circumstances, or the poverty or intemperance of their parents, have been deprived of the advantage of mental culture. But influenced by various motives, they have all become teetotalers, and have renounced the use of strong drink as a beverage. Now it must be quite clear that persons differing in so many particulars and possessing different degrees of knowledge and experience, will act in a very different way when suffering from disease. And I think from what I have seen that in reference to the medical use of alcohol the teetotalers may be divided into five classes. The first class appear glad when they are ordered by their doctors to take wine or bitter beer, and they promptly obey the order. These persons have generally had very little experience of abstinence, certainly not enough to set them free from the popular delusion respecting strong drink. I should be sorry to censure them, for they no doubt act conscientiously according to their light. But their light is so very small that it hardly differs from darkness. The second class of teetotalers, when ordered to take strong drink, receive the order with regret; but, as they have never studied the scientific aspects of the temperance question, and know little or perhaps nothing of physiology or the laws of health, they do not venture to question the wisdom of their medical advisers, and they consent to take the alcoholic medicine. The third class are generally persons who have read more on the question, have had greater experience, and possess more firmness than the preceding classes. Now, when any of these are ordered to take wine or beer, they receive the order with repugnance, they doubt its propriety, they hesitate and postpone taking the drink, and while they are doubting and delaying to take the drink, they generally, to the astonishment of their doctors and their drink-loving acquaintances, get per-

fectly well without it. The fourth class is made up of persons who have had a long experience of teetotalism, who have studied the question of abstinence in all its phases, and who have acquired a sufficient acquaintance with chemistry and physiology to enable them to understand the nature of food and drink, and something of the laws of health. If I belong to any class of teetotalers, I hope I belong to this class. When any of this class find it necessary to call for medical aid (and that of course is very seldom), they prove troublesome patients. For if their doctors order them to take wine or bitter beer, instead of receiving the order with thankfulness, they begin to doubt the doctor's science, and want to know the why and the wherefore; and as the doctors generally are not well up in the "alcoholic controversy," and break down in their attempts to show the necessity for alcoholic drink, the teetotalers belonging to the fourth class refuse to take it, and live and

die without it. We of the fourth class are willing to take alcohol when it can be shown to be really necessary; but I have never seen any real necessity for it, and I am now in my thirty-fifth year of abstinence from alcohol, in health and in sickness. The fifth class of teetotalers, I believe, are not very numerous, but I have met with them in various parts of the kingdom. They have resolved never to take alcohol under any circumstances. Now I think that, in the present state of medical knowledge, this is perhaps going too far; as there may be a few cases in which alcohol may be essential. But of this I am certain, that alcohol is never of service in health, and very seldom of any use in sickness. What is wanted to prevent these mistakes respecting alcoholic drinks is knowledge of their chemical composition, and their physiological action. And this knowledge can only be acquired by observation, experiment, and experience.



### ALCOHOL IN TYPHUS FEVER.

A LAD sixteen years of age left a port in the English Channel in a vessel bound for a coal-port in the North, and being seized with typhus fever he was put ashore at an intermediate port, and placed under the care of a medical man. In *three days* he died; and in the attendant's account there was a charge for five pints of wine and one and a-half pint of brandy. As it was thought incredible that so large a quantity of intoxicating liquor could have been prescribed by the surgeon for the boy's use, inquiry was made of him, when, somewhat mistaking the object of the inquiry, he wrote extolling the character of the nurse, asserting the reasonableness of the charges, and saying, "The wine and brandy, to the amount you specify, were ordered by me." In reply to this, the following letter was penned by the shipowner, and it is hoped that its perusal may be of use to others:—

"I beg to thank you for your reply to mine of the 25th ult., and to assure you that you quite mistake the motives of my inquiry. I would neither undervalue the *care*, attention, nor efficiency of the nurse, nor would I scruple at any reasonable payment for her services; but, being unacquainted with her, and knowing that many nurses are addicted to the use of intoxicating liquors, and thinking also that the quantity of wine and brandy charged for by the nurse was more than could have been consumed by the boy in the three days, and more than is required by the Government for a ship's crew of ten for twelve months. I thought it right to ask whether you had ordered that quantity.

"Allow me to say that I have no objection to the legitimate use of alcoholic liquors as medicines, &c.; but looking to the fact that they are sold of such varying strength, and are so often adulterated, I cannot help thinking

that they ought to be selected and administered with as much care as any other medicine. I fear it is too often assumed that stimulants are necessary when they are not, and also that if they do no good they will not do much harm; and to this *great delusion* many lives are sacrificed.

"I am happy to think that many of the popular fallacies respecting alcoholic liquors are now giving way, and both the public and the profession are beginning to ask whether they possess the properties which have been ascribed to them. This is especially the case in the routine of *fevers*; and many medical men have now quite discarded their use in the treatment of typhus, scarlatina, and other cases of acute disease. I know that men of your profession, especially in large towns, are often so much overworked that they have but little leisure for study; and as this may be your case, I hope you will excuse me for laying before you a few facts in a condensed form, trusting that you will not attribute to me a dictatorial spirit, or a desire to assume the character of teacher.

"1. The *Lancet* lately gave a report of cases of typhus, under the treatment of Dr. Garrod, of King's College Hospital, which had been successfully treated without *drugs* or *stimulants*; only some coloured camphor-water was used as a placebo, whilst nutritives, eggs, beef-tea, milk, and arrow-root were allowed.

"2. Dr. Billing, the introducer of 'Chemical Lectures,' in his first principles, says, 'In *typhus* we should avoid stimulants as much as possible, inasmuch as the nervous centres being in a state of congestion, neither they nor other organs can have their power increased by them. Whereas by indirect (sedative) practice we relieve the organs and give them an opportunity of recovering themselves.'

"3. Professor Bennett, in his paper read before the Royal Medical Society of Edinburgh, says, 'In my experience, which has extended over thirty years, I have almost invariably rejected the use of wine in the treatment of fever.' In this paper he shows that not only cases of ordinary fever

(typhus), but of typhus gravior, had been most successfully treated by him.

"4. Dr. Henderson, of Shanghai, reports that by the non-stimulant treatment of fever he reduced the deaths from 28 to 7 per cent., and Dr. Bishop, of Naples, reports equal success by the same method.

"5. Dr. R. D. Mussey says that, 'under the stimulant practice, new centres of irritation are often established, which if not sufficient to destroy the patient, prolong the period of the fever, and frequently cause relapses, or a lingering convalescence.'

"6. Dr. Chambers finds as the result of his practice under *ordinary* treatment of fever one death in five, but under the improved restorative method only one in forty.

"7. Professor Gairdner, of the University of Glasgow, collected large statistics, and published them in the *Lancet* of March 12, 1864. His figures in regard to the treatment of typhus are worth studying. A very great reduction in the quantity of stimulants was attended with a corresponding reduction in mortality. Wine reduced from 34 ounces to 2¼ ounces per patient, and spirit from 6 ounces to 2½ ounces was followed by a reduction of deaths from 17 to 10 per cent.; whilst of 210 cases of children under the ages of fifteen, treated without alcoholic stimulants, *all except one recovered*, which one had no medicine given, being 'moribund' when brought into the hospital.

"See also the Professor's paper in the *Lancet* of January 21, 1865, where the conclusions arrived at in relation to upwards of 100 cases are stated,

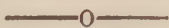
"8. Dr. Wilks, of Guy's Hospital, says, in the *Lancet* of February, 1865, 'At the present time there are advocates for a universal method in favour of alcohol in all cases of fever. In my intercourse with medical men I judge that very few are scarcely alive to the fact that typhus fever is very rarely fatal in young persons, and therefore they are too apt to attribute recovery to their medicines. Young persons always do well if left alone; of this fact I could now quote a large number of cases in proof, and, on the

contrary, the few cases which I have seen end fatally, have been those in which a large amount of stimulant was given at the commencement of the disease. The only two cases which I have seen fatal of late have been those of two students to whom a large amount of stimulant was given, and who had the care of the most assiduous nurses.'

"Nothing would be easier than to multiply testimonies similar to the above from physicians and surgeons of eminence, in both this and other countries, but I fear to trespass further on your valuable time and patience.

"Hoping you will excuse the liberty I have taken,

"I remain, &c."



### A VALUABLE MEDICAL TESTIMONY.

At a Band of Hope demonstration, recently held in the Corn Exchange, Preston, the chairman, J. A. Bowen, Esq., M.D., in opening the proceedings, said he presumed that he had been selected to occupy that very honourable position that night because of his connection with the medical profession, and he felt sure they would be glad to confer the same distinction and honour upon every medical gentleman in the borough, provided they would take the same stand in regard to temperance principles as he did. It might startle some of them when he said that he believed the liquor traffic to be in a great measure, if not entirely, in the present day in the power of the medical profession. He believed it was in the power of the medical profession to either uphold or suppress it. It would be an easy thing for him to cause his patients to take from £3,000 to £4,000 worth of liquor a year, and taking a much more moderate quantity he assumed that the medical gentlemen in this town influenced the consumption of liquor to the extent of over £100,000 per annum. He believed that this could be easily proved, and if so, a great responsibility rested upon the shoulders of the medical profession. As they would infer from his first remark, he had been a teetotaler all his life, and had never drank a glass of any kind of intoxicating liquor since he was born. He had been enabled to endure all the hardships of the medical profession, in hospital and out of hospital, by night and by day, without one drop of intoxicating liquor,

and he thought he looked as well and enjoyed as good health as any of those gentlemen who said they could not do without it. Some years ago he used to prescribe it pretty freely for his patients, because he wanted them to have the advantage of all the benefits ascribed to that wonderful stuff. In consequence, however, of never seeing those wonderful benefits which were so much talked about arising from its use, he ceased to prescribe it, and he found he was more successful without it than with it. He had seen it freely prescribed in hospital, and in private practice, and one thing had particularly struck him, and he wondered it had not been observed by many more persons, that was the mysterious sinking off of patients under the influence of liquor. They might ask, "How should that be so?" Alcohol, he might explain, had a twofold action. First it excited a man, and then, when that had passed away it stupefied him. That stupefying action so hid the natural symptoms of the disease under which the patient might be suffering—it, so to speak, took away the finger from the clock, or the index which allowed a medical man to read the case, and say at what stage it had arrived—that frequently they would hear of cases of medical men coming within an hour of death and saying the patient was doing well. There had been an artificial state produced by the liquor which deceived the doctor. He did not see the usual symptoms, and consequently he gave a favourable opinion that the patient was

doing well, while in reality the disease was smothered by the alcohol, and the patient died in an hour or two. Could they wonder at this when they saw how drink stupefied a man? He would fall, or run against a wall, and did not feel his injury till afterwards. It was

not for him, however, to occupy their time that night, as he had now come to reside amongst them, and no doubt he would have frequent opportunities of giving his opinion as to the nature and effects of alcoholic liquors upon the human constitution.



### BEEF-TEA *v.* ALCOHOL.

At a recent convention near Boston, an interesting fact was stated in regard to the use of alcoholic stimulants as recommended by many physicians of respectability and extensive practice. It seems that a certain well-known practitioner had ordered one of his patients, who was in a very low condition and scarcely expected to live, to take a little whiskey and wine alternately, at regular and frequent intervals. The patient, without his knowledge or consent, was supplied with the prescribed liquors, and they were brought into his room by the nurse, and preparation made to administer them according to the prescriptions. But the sick man, true to his temperance principles, ordered the bottles to be securely corked and set aside, and then requested the nurse to prepare for him some good beef-tea and give it him in the same quantities, and at the same time, and as often as the alcoholic stimulants were to have been taken—"For," said he, "if I must die, and it is possible I may, I am resolved to die in my sober senses." His desire, after much persuasion and opposition, was at length complied with, and the beef-tea was made ready and faithfully administered. The next day the doctor came, and found the condition and symptoms of his patient very encouraging. This improvement went rapidly and steadily forward for a week or more, when the doctor, in a self-satisfied style, told his patient that he was getting along so nicely that he might discontinue the use of his stimulants. "But," said the patient, "I haven't used your stimulants at all;" and pointing to the

bottles he said, "those corks have not been drawn, and not a drop of the whiskey or wine have I taken."

"You are better, nevertheless," said the doctor, "and what have you been taking?"

"Simply beef-tea, and nothing more," was the reply.

This experience was related in the convention referred to by this sensible man, who had declined the advice of his physician, and had, notwithstanding, succeeded in regaining his health. To add to the interest of the occasion, and to give additional force to the narrative, the doctor, who was present, and who, by the way, counts himself a good and consistent temperance man, testified to the truth of the statement which had just been made, and said that this case, with others which had come under his observation, had perfectly convinced him that the best medical talent in the country was, for the most part, radically wrong in the over use of alcoholic stimulants, and that, in a great majority of cases, their use could be dispensed with, and substitutes provided which would be equally efficacious and entirely unobjectionable.

In view of the fact that very many acquire the love for intoxicating beverages in consequence of taking them medicinally, and that many more who have reformed have been led back to drunkenness by the alcoholic prescriptions of physicians, it is surely incumbent upon them, as far as possible to avoid this practice, so abundant in fatal examples, and so fraught with danger to all.—*Zion's Herald*.

## ALCOHOL IN BRONCHITIS AND HEART-DISEASES.

DR. CHARLES ELAM, of Harley Street, recently contributed two articles to the *Lancet*, under the title of "Medicine, Disease, and Death." In the second of these, published on the 12th of June, Dr. Elam says:—

"I have reserved for this late consideration one monstrous and gigantic source of evil—a compound of theory and resultant practice—which I believe to be the cause of more avoidable deaths than all our other errors combined. The theory is, that all disease tends to death, and therefore the powers of life must be supported. The practice is, the great prevalence of feeding and excessive stimulation. Space does not allow me to enter upon any scientific investigation of the subject. I must content myself with giving the result of long and careful thought, with ample test and experiment in hospital practice. That result is, that nothing can be more erroneous than the theory—nothing more fatal or more fruitful in proteiform evil than the practice.

"I have stated in the previous paper that the deaths from bronchitis have increased from 2,067 in 1838 to 41,000 in 1866, and that those from 'heart-disease' have increased during the same time from 3,319 to 21,197. Now bronchitis is not, or rather ought not to be, an essentially fatal disease, in the sense that cancer, pyæmia, or phthisis may be considered such. Disease of the heart is likely, in some degree to shorten life, but it is by no means so essentially and speedily fatal as is often supposed. It is almost always by the production of secondary

and congestive affections that disease of the heart proves fatal, and if these can be warded off, life may be prolonged indefinitely. I have known many patients with valvular obstruction live a long term of years, and at the end be hurried off by indiscreet zeal in treatment. I cannot give individual instances for obvious reasons.

"With regard to these two diseases, bronchitis and heart affection, the increased mortality in which is so enormous as to account for the whole average increase in deaths, I have not the slightest hesitation in attributing the fatal result, in a vast proportion of the cases, to the vicious system of treatment that has become more and more prevalent for many years, and especially to that most pernicious habit of fashion of giving stimulants largely and indiscriminately. Alcohol is poison in bronchitis, speaking generally; and in affections of the heart there is nothing that so much favours the development of local congestions as these stimulants.

"Another serious evil connected with this practice is its ultimate result on individuals and families, apart from the disease. By the loose method in which many of our profession order wine and brandy for even slight neuralgic affections, a taste for drinking is established, the consequences of which are often not to be calculated. Most assuredly I have seen large families swept off entire, all by affections connected with alcoholism, the original use of the stimulant having been by 'medical order.'"



## MEDICAL PUFFERY OF ALCOHOLIC COMPOUNDS.

THE mischievous practice of the medical profession lending their names in recommendation of the use of alcoholic compounds, manufactured by puffing individuals, is by no means confined

to this country. An Australian paper contains a long advertisement, emanating from New York, extolling the alleged virtues of a certain somebody's "Schiedam Schnapps," or, in vulgar

parlance, gin. The advertiser states that the "Schnapps" was introduced some twenty years ago "under the endorsement of 4,000 leading members of the medical profession"; that it was submitted to a number of distinguished chemists for analysis, and by them was pronounced to be the purest spirit ever manufactured; and that "its purity and properties having been thus ascertained, samples of the articles were forwarded to 10,000 physicians, including all the leading practitioners in the United States, for the purpose of experiment. A circular, requesting a trial of the preparation and a report of the result, accompanied each specimen. Four thousand of the most eminent medical men in the Union promptly responded. Their opinions of the article were unanimously favourable. Such a preparation, they said, "had long been wanted by the profession, as no reliance could be placed on the ordinary liquors of commerce, all of which were more or less adulterated, and therefore unfit for medical purposes."

We are afterwards told that "The proprietor has in his possession over 10,000 letters from physicians, who testify to its medicinal qualities in the following complaints, and have prescribed it in their practice:—Dyspepsia, Dropsy, Gravel, Rheumatism, Gout, Asthma, Colic, Cholera, Dysentery, Fever, and Ague." These physicians must have been most self-denying creatures to have thus recommended gin in place of physic, and the gin-shops instead of the surgery; but some light is thrown on the matter by a letter dated January 10th, 1858, sent by the manufacturer of the gin to

Professor B. I. Raphael, Dean, New York Medical College, in which the latter, after being reminded that a dozen sample bottles of gin had been sent to the college, is asked to experiment with it in the City Hospital in the following cases:—Dyspepsia, Gravel, Gout, Rheumatism, or any ordinary obstruction in the kidneys or bladder. In reply, a letter signed by Valentine Mott, M.D., Professor of Surgery, University Medical College, New York; J. M. Carnochan, M.D., Professor of Clinical Surgery, Surgeon-in-Chief to the State Hospital, &c.; Lewis A. Sayre, M.D.; H. P. De Wees, M.D.; Joseph Worster, M.D.; Nelson Stelle, M.D.; John O'Reilly, M.D.; B. I. Raphael, M.D., Professor of the Principles and Practice of Surgery, New York Medical College, &c.; and others, states that the gin in question has been in use for several years in the hospital, and that in their practice they used it in preference to any other alcoholic stimulant. The Medical Faculty of Philadelphia, being addressed in like manner, gave a similar reply through their secretary, I. L. Adams, M.D., who stated that the faculty had the "Schnapps" tested by a competent chemist, and that they could safely state it to be a superior article of gin, adding, "We consider it *healthful as a beverage* and effectual in its medicinal qualities, and shall henceforth prescribe it in our practice when an alcoholic stimulant is required." We shall be anxious to learn what our medical contemporaries have to say to these recommendations of the profession in favour of the healthiness of gin as a beverage especially. Do they not rather tend to cast discredit on medical science generally?



HOW TO BE SAFE.—"Doctor," said a patient a short time since, after reading over the prescription of a distinguished friend of temperance, whom ill-health had obliged him to consult,—"Doctor, do you think a little spirits

now and then would hurt me very much?" "Why, no, sir," answered the doctor, deliberately: "I do not know that a little now and then would hurt you much; but, sir, if you don't take any, it won't hurt you at all."

## Notes and Extracts.



**HABITUAL DRUNKARDS IN ILLINOIS**, by a recent act of the legislature, are hereafter to be subjected to a very stringent course of treatment. They are classified with indigent, idiotic, and insane persons, and are to be placed under the care of guardians or of the overseers of the poor. A similar provision exists in Pennsylvania, but the regulations are more strict in Illinois, since in the latter State when a person has once been declared an habitual drunkard, the guardianship over him must continue for an entire year.

**STIMULANTS TO CHILDREN.**—Ignorant people, especially of the lower classes, have an unbounded confidence in the curative powers of spirits, and they not unfrequently inflict a good deal of injury on young children by the administration of pure brandy to them. A large dose of undiluted spirits to a child may even prove fatal; an instance of which recently occurred at Greenock, on board a Liverpool steamer, in the person of a little girl, aged five years, to whom an overdose of brandy had been given during the voyage as a remedy against sea-sickness.—*Lancet*.

**WHY DON'T THE WORKING POOR PAY THEIR DOCTORS?**—The *Times* in an article on "Workhouse Relief" has the following:—"Can it be said, for example, that a man is really fit to give a vote for the choice of proper men and measures in the government of his country when he will not save a few shillings to reward a man who saves his life? Of course, this brings us round to the question whether he can. Of course he can by curtailing some superfluous comforts or luxuries, whichever they be called. We shall be told this is hard. But the question is one of morality, which may excuse hardness. It is better to be an honest man than to drink enough

beer and smoke enough tobacco, even supposing them necessary."

**CONVALESCENT HOSPITALS FOR THE SICK POOR.**—What a weight of anxiety would be taken from the mind of many a Poor-law doctor if he could order a patient a dose of fresh air and sunshine as easily as he now orders beef-tea and brandy, and could feel that he was indeed placing health and independence once again within the reach of those who now languish on in misery in spite of his most earnest efforts. Scores would be cured in half the time, and would be far less likely to break down after their return to work. Such an arrangement would be a real economy for ratepayers, who would find their saving not only in the cost of stimulants, but in the diminished number of widows and orphans now left, by the fatal effects of disease, for years upon their hands.—*Lancet*.

**THE DRINKING CUSTOMS AND LICENSING DAYS.**—We observe with much pleasure that during the past week in several places efforts have been made by earnest-minded individuals to induce magistrates to limit the number of licenses granted for public-houses. There is no class of the community so well acquainted as medical men with the untold evils of the drinking customs. To those who have leisure for conscientious thought and action in the matter, we would specially commend this mode of procedure. It is one which involves no extreme opinion. It is impossible to doubt that, if public-houses were diminished one-half the community would gain greatly in physical and moral health. We hope that members of our profession, many of whom have great influence, will do what they can to assist deputations in this matter.—*British Medical Journal*, Sept. 18.

**THE ACTION OF ALCOHOL.**—Alcohol is nothing more nor less than a

poison which the system eagerly labours to get rid of as fast as possible. It passes through the body as electricity does, adding nothing to it, but producing certain phenomena in its passage. It is to all intents and purposes a foreign body—a foreign agent, a poison and not food. When it is of service, it is of service as a drug or medicinal agent, but just as arsenic and opium, which are poisons, are valuable remedies. In its nature as a medicinal agent, alcohol is a narcotic stimulant, one of the class of substances which, given in repeated small doses, will produce a stimulating effect, which may be kept up for some time; an effect, however, which is certain to be followed on its withdrawal by a depression profound in proportion to the length of time it has been used, and the quantity administered.—*Dr. John Roberts, Salisbury.*

**CURIOUS EFFECTS OF DIFFERENT STIMULANTS.**—McNish, in his able work on “The Philosophy of Drunkenness,” gives an account of the effects of different stimulants on the system. Dr. Paris in his “Pharmacologia,” relates some curious facts relating to stimulants. Hobbes drank cold water when he was desirous of making a great intellectual effort. Newton smoked, Buonaparte took snuff, Pope strong coffee, Byron gin-and-water. Wedderburne, the first Lord Ashburton, always placed a blister on his chest when he had to make a great speech. The great Lord Erskine took large doses of opium. On the trial of Queen Caroline, Erskine, anxious to make a great speech, took an overdose of his favourite drug. The effect was striking; he dropped into the arms of Lord Stanhope who sat next to him.—*Medical Times and Gazette.*

**A MEDICAL PRESCRIPTION AND ITS RESULTS.**—I was attending an old lady, who was suffering from disease of the liver of which she was not likely to recover, resulting from the habitual use of alcoholic drinks. Her daughter being very anxious about her, proposed a consultation with an eminent hospital physician. We met

and the doctor came to the same conclusion as myself as to the disease and its cause. The family came in to hear the doctor’s opinion, when, with sundry melancholy shakes of the head, he informed them of the nature of the malady, and its origin, the habitual use of alcoholic stimulants; when he received in reply, “Oh, doctor, it cannot be so; she came and consulted you about fourteen years ago for a pain in her back, for which you directed her to take a little gin-and-water, and, as it generally did her good, she has continued the practice ever since.”—*J. P. Scatliff, M.D., London.*

**TWO FRIENDLY SOCIETIES CONTRASTED.**—On comparing the results of sickness and death occurring in two large friendly societies under my care, the one composed of total abstainers, and the other of non-abstainers, I have arrived at the conclusion that the total abstainers have much better health, are liable to a much less amount of sickness, and have fewer deaths than the moderate drinkers. In the non-abstinent society I find that the average amount of sickness experienced last year was eleven days, twenty-one hours per member, and that the number of deaths was about one and a-half per cent. In the total abstinent society the amount of sickness experienced last year did not amount to more than one day and three-quarters per member, and the number of deaths was only two in five years, or less than one-quarter per cent. per annum. I ought, perhaps, in justice to myself, to add that in the treatment of the various diseases, in both societies, no alcoholic liquor was administered.—*Henry Munroe, M.D., Hull.*

**STRONG DRINK IN WORKHOUSES.**—It is now more than twenty-eight years since I became medical officer to the Longford Union Workhouse. For the first seven or eight years I used porter, wine, and spirits in the usual way, and with the usual results — *a large mortality among the sick, and much confusion, irregularity, and misconduct among the*

*attendants.* Advice, remonstrance, and even complaint were ineffectual. I saw the use of alcoholic stimulants was the cause of all the evil, and resolved, at any hazard, to discontinue their use. Matters might improve, but they could not be worse. For some months I had much difficulty to contend with, as it was alleged on all hands that no hospital could be carried on without a liberal allowance of stimulants. I saw clearly I was in the right way, and made up my mind at all risks to pursue it, and stand or fall by the result. My determination was rewarded with success : the large mortality soon became less, and the unmanageable nurses and attendants, being deprived of the handling and tasting of the stimulants, sought employment elsewhere, and were replaced by more orderly persons. It is now more than twenty years since wine, spirits, or porter, were used in the hospitals under my care, and the result in every way has been most satisfactory. Putting economy entirely out of view, in my opinion the disuse of alcoholic stimulants tends much to promote health and morals even in a workhouse hospital.—*Simon Nicolls, M.D., Longford.*

A RECIPE FOR GOOD DIGESTION.—An American physician, Dr. Bellows, remarks, in a new work, “How to be Sick” :—“Nothing is better understood than that there is connection between cheerfulness and good digestion ; and the trite expression, ‘to laugh and get fat,’ undoubtedly has its origin in observation, if not in philosophy. What an astonishing amount and variety of food can be disposed of, and perfectly digested, at one sitting of cheerful and happy, not to say jolly and merry old friends, and that without alcohol, or other unnatural stimulus to help digestion. I venture to say more than three times as much as the same individuals could eat and digest in the same time if each took his meals by himself. This one fact is worth more than all else I can write to show the dependence of the digestive powers on the state of the mind, and to prove that

he must be lean and haggard who, keeping his mind constantly on his business, bolts his meals in silence and solitude, even in the presence of his family. I commend it to the careful consideration of uncomfortable mortals who never properly digest their food, and whose bones are too poorly clothed with flesh, and too poorly protected even to allow them quiet rest, and who, therefore, envy ‘fat, sleek-headed men, and such as sleep o’ nights.’ ”

THE NORTHERN HOSPITAL, LIVERPOOL. — ALCOHOLIC POISONING. — Among the most urgent medical cases admitted into the hospital during the year, there are several of acute alcoholic poisoning, which during 1868 numbered thirty-six. This generally results from the practice of sucking new rum from the casks at the docks, and not infrequently very young boys are the subjects of it. The patients are generally completely insensible, exhibit no feeling when the eyeballs are touched, while the pupils are insensible to light ; and the breathing is often stertorous. They sometimes remain in this condition for several hours. The treatment adopted is to pass the stomach-pump immediately, wash out the stomach with lukewarm water, to use galvanism, to apply sinapisms to various parts and to keep the extremities warm. Almost every case recovers under this treatment, but sometimes it is found necessary to have recourse to artificial respiration, and administration of stimulant enemata, &c. ; occasionally a case terminates fatally, but this very rarely happens.—*Medical Times and Gazette.*

THE HOME SECRETARY AND CONFIRMED DRUNKARDS. — A puzzling problem has been put before the Home Secretary by Mr. Darrah, a resident of Manchester. Mr. Darrah, it seems, is acquainted with a drunkard who suffers from frequent attacks of delirium tremens, during the existence of which he is obliged to be placed in a lunatic asylum. His wife is willing to pay for his retention in safe custody, but the officials declare that they have no power to detain this

confirmed drunkard after recovering from the rabid symptoms of the disease. Mr. Darrah asks the Home Secretary, "What can be done to protect the wife and to save the man from his own folly?" Mr. Bruce replies as follows:—"The Government has announced its intention of introducing a measure for the better regulation of the trade in intoxicating liquors, which it may be hoped will have some effect in diminishing drunkenness and its attendant evils. The method, however, of dealing with persons in the condition of the man described in your letter is one of great difficulty, and Mr. Bruce is not at present prepared to recommend any change in the law with respect to such cases."—*Liverpool Mercury*.

THE INTERNATIONAL BOAT RACE.—While there can be little doubt that the human body may be fortified by a good and judicious system of training, so as to render it more capable of sustaining great and unwonted exertion, it is still more certain that the physical powers may be diminished and the health undermined by one of an opposite character. There were some who thought that the system pursued by the Harvard crew influenced the result of the late international race; and if their diet scale had been really such as was laid down by one of our contemporaries, the idea would have had some foundation. But we have ascertained that the Harvard men were allowed during their training plenty of meat, with milk, rice, vegetables, and fruit. Compared with the dietary of their opponents, it mainly differed in the matter of beer, which the Oxonians were allowed to consume, while the Americans used no beer, wine, or spirit. It is asserted that the Harvard crew had been in training for four years. We cannot pretend to express any opinion as to what might have been the influence of the differences in the rowing and steering of the two boats, or as to the effect of the want of experience of our river on the part of the Harvard men; but the differences of diet clearly had nothing to do with the result. The crews were well matched, the race was most

severely contested, and it is evident that the Oxonians had to put forth their full powers to make the victory theirs.—*Lancet*.

BOATRACING AND TEETOTALISM.—The following remarkable letter appeared in the *Standard* newspaper on the 1st of September, 1869:—"With reference to your remarks of the 26th instant, upon the diet of the respective crews, permit me, as an old oarsman—one who has been engaged in more contests than any amateur of his day—to state that during the years 1850 to 1857, I pulled in fifty-one public races, of which twenty-five were rowed on ordinary alcoholic beverages, whilst the last twenty-six were contested on principles of strict teetotalism—the principal liquid consumed being milk. Of the twenty-five races rowed on beer, &c. (1850 to 1854), fifteen were won and ten lost; whilst of those pulled as a total abstainer (1855 to 1857) I won twenty-two and lost only four. A large proportion of these races were for pair-oars, my partner in nearly all of them being the late A. A. Cassamajor, for six years amateur champion of the Thames. Prior to 1855 my lamented friend invariably pulled the stroke oar of our pair, but on taking to milk instead of beer I found my strength, and especially my 'staying' powers, so much improved, that I was able ever after to row stroke to him. All these contests (comprising the highest prizes for which an oarsman can compete) were chronicled at the time in *Bell's Life in London*, and are tabulated in the *Boat-racing Calendar*. Considering that the two systems of beverage have received in my case a fair trial, and being anxious to see dispelled the popular delusion respecting the strength-giving properties of alcoholic drinks, I hope you may be able to find space for this brief statement of facts in an early impression of your journal. "J. N.

"Thun, Switzerland, August 28."

DIPSOMANIA.—Dr. John Webster, F.R.S., in a letter to the editor of the *Lancet*, says:—"Your correspondent, Mr. Wilson Steel, having asked whether there be any retreat for dipso-

maniacs in this country,' permit me to state that such a receptacle has long existed in Edinburgh. It forms part of the 'refuge for the destitute,' known as Queensbury House, and when I visited the old establishment some years ago I was much pleased with many of its arrangements. Subsequent to my inspection a new building ('The Lodge') has been constructed, especially for drunkards, on the enclosure behind, looking towards Arthur's Seat, and of which the subjoined notice was lately published in an Edinburgh newspaper:—'Since the Queensbury Lodge was opened in August, 1866, forty-four-ladies have been admitted as boarders, and it is gratifying and encouraging to be able to report that many of them have returned to their friends entirely cured. The results of the treatment, when time has been afforded by a sufficient length of residence, has in all cases been very satisfactory; but where the patients have been removed after too short a period it cannot be expected that any permanent good can follow. It has been found advisable not to lay down any fixed rule of treatment, as the habits and temperament of each individual require to be studied and dealt with separately, the main object—the cure of craving for stimulants—being always kept in view. It has recently come to light that the excessive use of opiates, such as chlorodyne and pulmonic wafers, is, under the cloak of medicine, creating a new species of intoxication, which is as destructive, or nearly so, as the inordinate use of whiskey or brandy. Every comfort is afforded to the inmates, both as to board and lodging, and their health and amusement are not overlooked. Music, reading, and occasional driving into the country vary their life of retirement.' "

THE DRUNKARD'S OFFSPRING. — There is no more important problem in medical science than that of the production of physical degeneracy in children by the intemperance of parents, and it is one peculiarly appropriate for discussion at the present time. A novel point in the consideration of this subject was brought under

the notice of the Pathological Society by Dr. Langdon Down. This gentleman exhibited a case of arrest of development and growth in a child of five years of age, who had only the intellectual condition of one of nine months. She weighed 22 lbs., and measured 2 ft. 3 in. There was no deformity, but the child preserved its infantile character. Dr. Down called attention to this case as a typical one of a species of degeneracy of which he had seen several examples. They all possessed the same physical and mental peculiarities; they formed, in fact, a natural family. He had known them to live twenty-two years, still remaining permanent infants—symmetrical in form, just able to stand by the side of a chair, to utter a few monosyllabic sounds, and to be amused with childish toys. Dr. Down (who naturally, from large and rare experience gained at Earlswood, speaks with peculiar authority on such a matter) has found so close a resemblance between the instances, even to the extent of facial expression and contour, that he had been led to regard this variety of degeneracy to have unity of cause. In several cases he has had strong grounds for holding the opinion that these children were procreated during the alcoholic intoxication of one or both progenitors. In the case presented to the society there were no antecedent hereditary causes of degeneracy to be discovered. The first child was healthy; then the husband became an habitual drunkard. and there is reason to believe that the second and third children were begotten during intoxication, and they were both cases of this peculiar arrest of growth and development. The husband then entered on an industrious and sober career, and the fourth child, now fifteen months old, is bright and normal in every respect. Dr. Down pointed out that these cases were an entirely different class from those which arise from being the offspring of parents who had become degenerate from chronic alcoholism. The question here broached is a very important one for the physician and the philanthropist.—*Lancet*.

THE  
MEDICAL TEMPERANCE JOURNAL.

January, 1870.

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Original Contributions.

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DR. DRUITT ON INTEMPERANCE—ITS CAUSES AND ITS REMEDIES.

THE opening address of the President of the Metropolitan Association of Medical Officers of Health, when stripped of some allusions, which are blemishes in a scientific essay, leaves very little for sober criticism. It does not strengthen his case to pronounce a principle that stands in the way as absurd, and those who espouse the principle as insane. Those against whom such epithets are aimed have the consolation to reflect that many absurd things come to pass, and that the insanity of one age very often becomes a part of the philosophy of the next. We make no complaint on this head, but regret that Dr. Druitt has left the great problem, how to remove or abate the evils of our national intemperance, still unsolved. If possible he has rendered the question more obscure. It is clear enough how this has happened. Like many of his compeers, he thinks teetotalism a mere fanaticism, and is searching for arguments to prove that general sobriety is attainable, with a general use of intoxicating drinks. Even to this view of the case he has brought nothing new in the way of information or suggestion. Some of his graver positions we proceed to notice.

In doing so we must not lose sight of the attitude assumed by medical men, in relation to the Temperance movement. That they should cordially embrace it was not to be expected, but as members of a scientific profession it was undignified and unbecoming, in them, to manifest so much scorn and hostility, and to dogmatise so sternly. The students of the healing art have often had to quail before the dogmatism of theology, and therefore ought to be more tolerant to others. No dogmatism is so offensive and unworthy as the dogmatism of science. There are other reasons why they should cultivate the docility of the student, rather than assume the authority of the monitor. In the wide

world of nature's secrets, that which is known bears a small proportion to the unknown, and in medical science there is very much that is only now a matter of inquiry and speculation. There are unexplored mysteries in the Creator's laws, on the threshold of which the most gifted men enter with diffidence and awe. What is really known as to the laws of life? And yet some members of the profession turn away with disdain from that field of observation and experience opened up in every-day life, and which would assist them to correct conclusions. The profession does not welcome new discoveries. The story of Harvey is an old one, but has not lost its moral, and has been repeated since his time more than once. The treatment of Hunter is another example; and of him it may be said that he laid on a firm basis the foundations of what Hallam terms "the beautiful science of comparative anatomy!" While devoting his life and his means to a work of so much importance to the profession and to the world, he had to endure the neglect, and sometimes the contempt, of the profession. Dr. Anstie, in his work on "Stimulants and Narcotics," thinks it necessary to conclude his introduction by an appeal to the medical faculty, and he uses the following words: "Some of the views which I shall have to bring forward are opposed to ideas which have become, by the influence of tradition, incorporated into the state of things which are received as matters of course. I can only say that a considerable amount of experimental familiarity with the subjects of the present inquiry has convinced me that more is commonly taken for granted than will stand the test of proof in these matters; and that it is particularly to be noted, that the ordinary mode of reasoning on the effect of physiological agents is vicious, *ab initio*, because it retains, in many cases, the unmistakeable impress of metaphysical speculation applied to things with which it has no fit connection." This passage is significant. Dr. Anstie does not think it necessary to deprecate popular prejudices, but to conciliate those of his own profession.

Did our space permit, we could supply numbers of instances where the greatest differences prevail among medical men as to the treatment of ordinary diseases, and of many revolutions which have taken place, even in our own time, in medical opinion on vital subjects. Does not the faith in alcoholic drinks rest upon tradition? At all events, any dogmatic assertion as to the beneficial effects of these drinks upon the healthy human system, in the face of the experience of mankind in all climes and in all states of society, and especially with the experience of the last thirty years, is most unphilosophical. The result of this opposition, on the part of medical men, to teetotalism, is one not to be entirely deplored. The public mind is losing confidence

in the opinions of the faculty on this question, and the profession will have to follow where they ought to lead.

Dr. Druitt says:—"The statements made by coroners, magistrates, &c., to the effect that drunkenness was the cause of most of the crime and insanity that came under their notice in discharge of their duties, were not true, for they put the case in the inverse order. Instead of saying that a man was rendered criminal by drinking, the truer statement would be that the man had begun by committing crime and took to drink afterwards. The connection between drunkenness and insanity had been defined by Dr. Conolly, who said, 'The observation has often been repeated that insanity is caused by drunkenness. It seems scarcely just to ascribe the ailment of madness merely to intemperance. Intemperance itself is a malady incidental to unhappy combinations of social circumstances, and to be remedied by reforms of social life.' " The point here raised is of vital moment, for it is the argument used in another shape by many social and sanitary reformers, and involves a fallacy which we are most anxious to expose, for while it prevails it is an impediment to proper effort. In the simplest form the statement is this,—Intemperance arises from ignorance, discomfort, and ill-health; and therefore to counteract intemperance successfully we must educate the people, provide them with better homes and with cheerful amusements, and by sanitary improvements raise the standard of health. This mode of treatment recommends itself to one class of benevolent men, it asks from them the surrender of no personal indulgence; and it is specially acceptable to a class of dilettanti reformers, who look upon the masses as human beings for whom everything is to be done, and not as free agents, in whose hearts it is desirable to implant the desire to help themselves. It would argue a very imperfect knowledge of society to assert that intemperance is the sole cause of poverty, vice, insanity, and crime; but it is quite safe to say that, among the producing causes of those evils, it is the greatest and most prolific, and that it aggravates the evils it cannot be said to produce. When we speak of first and secondary causes, the greatest precision in observation and in language is required, for here it is that good men so often stumble, and are led to mistake the symptoms for the disease. When Dr. Conolly speaks of "unhappy combinations of social circumstances" to be "remedied by reforms of social life," he uses mere platitudes, that bring us no nearer to the truth. What are the "unhappy combinations," and whence do they arise? No man will say that those brought up in well-conducted homes, and surrounded from youth upwards by favourable associations, will be liable to fall into drunkenness in the same degree as those whose condition is the very opposite. They are removed from many temptations,

and to a large extent are fortified against such as assail them. But the fact that many such as Dr. Druitt describes—persons of education and of acknowledged and indisputable piety—fall into habits of intemperance, is evidence that education, high motive, and elevated position, do not afford an infallible protection against intemperance. Are not these cases sufficiently numerous to induce an inquiry whether there may not be something wrong in the drink, the love of which often disgraces a man of high culture, and ruins a woman of spotless reputation? But to go down to the humbler classes, for whom there is more excuse for indulgence in strong liquors, is it not a serious mistake to attribute their intemperance to the wretched condition of their homes or the destitution of their lot? There are many causes at work, closely interwoven with each other, so that it is difficult to discriminate the primary from the secondary ones; but intemperance will be found combined with them, and very near the root of them, confirming what is evil, and more firmly rivetting the bonds of sin and misery by which they are enchained. It is impossible to raise them up to a higher level until that intemperance is subdued. Is not drinking, we will not say drunkenness, the connecting link of the “unhappy combinations”? and are not the consequences of that drinking covering a larger area every succeeding generation? The present race of paupers, criminals, and idiots, may not have manifested a passion for drink until some other weakness or vice has induced it; but what were the habits of the parents? There are hereditary predispositions to crime of all kinds, and drinking may follow, rather than precede a fall into vice. It does not follow from such results that drinking had nothing to do with producing them. The deterioration has been going on for centuries, and is still going on, in all ranks of life. Dr. Elam, in his essay on “Natural Heritage,” in “A Physician’s Problems,” page 87, makes this clear enough. He says,—“Differences of social rank and condition exert a powerful influence upon the results. The children of the rich intemperate may be weak, nervous, excitable, and prone to morbid conditions of mind and body, yet they have advantages which those in a lower life have not. . . . Far different is the lot of the intemperate poor. . . . Yet, different as is their station, in one particular they are alike. The offspring of the confirmed drunkard, rich or poor, *will inherit either the original vice or some of its countless, protean transformations.* The external aspect may in one case be less revolting and coarse than in the other, but none, as a rule, can escape the inevitable law, written in the most hidden recesses of our nature, in accordance with which the children do suffer for the sins of the parent; and even at the third or fourth generation the taint is hardly wiped away, save by the extinction of the line or family.”

Primarily, the greatest producing cause of poverty and crime, and consequently all their attendant evils, is intemperance. This was received as an established fact long before teetotalism was proclaimed. In an ably-written article on "Insanity and Madness," in the *Quarterly Review* for July, 1816, p. 400, the writer says, "It is by sophisticated tea and gin that the nerves of the poor are unstrung; and these articles are not confined to adults, but dealt out to their children. It is only for physicians who are in the practice of visiting the miserable hovels of the London poor, to form an adequate conception of the rapid deterioration of the race of paupers by the increasing habit of substituting what *excites* merely in lieu of that which nourishes; and it is especially afflictive to read in the countenances of the young initiates the marks of their future destiny."

If this be a sound view of the case, what becomes of the reasoning of Dr. Druitt? The causes he assigns are merely results; at the best it is only arguing in a circle, ending just where it began. He tells us that "religion and rhetoric" have alike failed, and it is necessary that we should go to the roots of the vice. So say we; but while he would resort to a number of doubtful and undefined remedies, we go the disuse of strong drink. However impossible it may appear in the face of those gigantic interests which have grown up with the drinking system, and that appetite which is very general, and all but irresistible, we have faith that teetotalism will meet with general adoption. What would be the effect if religious bodies, medical men, and the educated classes—those who govern opinion, custom, and law—were to abjure the use of intoxicating drinks? How long would drinking continue? Should we be content to pay that heavy and inexorable tax that intemperance lays upon us? If an earnest conviction prevailed that strong drinks were in themselves evil, we should not take into account the abundance and cheapness of the products out of which they are made, nor the facility of production. Men do not brew beer in tea-kettles, and if the houses for the sale of it were closed, drinking beer, as a rule, would be given up; and how long would the public sale be permitted, if the tide of opinion set against the drinks? This would get rid of many vexed questions of social policy, and amazingly simplify our plans for the treatment of pauperism and crime. In a system that aims at the extirpation of drunkenness, by the disuse of intoxicating drinks—drinks which under the best circumstances are proved to be dangerous—there is assuredly nothing absurd, and it is the mildest form of insanity known to these modern times.

But suppose we grant Dr. Druitt all he asks. We will suppose that drinking is the effect of bad social arrangements. Is there

no evil in the free use of an article which is proved to have peculiar attractions for the viciously disposed, and which renders vice, pauperism, insanity, and crime more inveterate? Whether intemperance be taken as the cause or effect of certain conditions, there it is, to render those conditions still worse, and to obstruct the means by which they may be altered or improved. But we follow the teetotaler further than all this. He says that the drinks are in themselves hurtful—that the moral and physical evils resulting from them may be taken as evidence of their evil character. This is the question in debate, and Dr. Druitt has brought nothing to the discussion to aid us. His whole argument is contained in the following few sentences:—

“Food was the source of heat and muscular movement, and was the fuel to enable the human frame to work, and to carry on thought, and to provide that cheerful flow of spirits which was necessary for the tolerance and enjoyment of life. The most common way of removing disagreeable thoughts, and of creating pleasant ones, was by reverting to one or other kind of stimulating food, and alcohol was the most universal, and the most capable, under given conditions and in a given time, to produce a semblance of those effects, that ought better to be sought from healthy food, work, or rational amusement. Therefore it was that its use so often led to its abuse. The abuse began in some cases by making it a palliative for every ill affecting body and mind. By another class it was made the substitute for recreation, and took the place of books, music, &c.”

There is much looseness of reasoning and of expression in this passage. It merely utters the fallacy which underlies all the arguments usually brought to defend the common use of alcoholic drinks. Taking wine, spirits or beer, it is true, is the “common way” of meeting “disagreeable” circumstances—and why? Because of the false impression that prevails as to the qualities of strong drinks. It is the almost “universal,” but certainly not the most “capable,” substitute for healthy food, exercise or rational amusement. It is the one always at hand, and resorted to under all conditions of mind or body; but the abuse begins earlier than in making it “a palliative for every ill affecting mind or body:” the abuse begins by its use as an article of food. This is the fundamental error, and so long as it obtains the evils of intemperance will prevail. A study of the laws of health teaches us that nothing acts as a restorative so rapidly as wholesome food. The hard workers in our workshops and foundries, who practise total abstinence, can testify to that fact, but it is laid down by Dr. Anstie. He is favourable to the employment of alcohol, but it must be borne in mind that, in the book we are quoting, he is discussing the use of stimulants as a branch of therapeutics, and not as agents to be used by men in health. He makes a statement that is universally applicable. “Of all stimulant medicines, there is none which approaches more closely

to food, in its manner of relieving pain, than opium administered in small doses. Brown indeed considered that this drug was far more potent, as a stimulus, than any other substance; but this is certainly a mistake, for nothing acts so rapidly as ordinary food in cases where it is suitable." We have, again and again, heard the experience of men who have been accustomed to exposure, to long journeys, and occasional night work, and who have tried both systems; that of taking stimulants to recruit the exhausted energies of mind and body, and who, at an after period of life, resorted to wholesome food with tea or coffee, and they pronounce in favour of the latter. Is it not wiser, then, to ascertain whether this is not the result of every fair experiment, and, if so, to lift a warning voice against the use of alcohol, rather than make a compromise with it, by speaking of its common use, and the prejudices in its favour, as reasons why that use should be continued? There is no evil thing that could not be apologised for on the same grounds. If men live in violation of the laws of health, or occasionally overtax the energies of brain and body, the true philosophy is to call them back to the necessity of sober living, greater care, and proper treatment, and not teach them the use of palliatives, which increase the mischief, and are always attended with danger. The occasional use almost invariably ends in the common use, showing how insidious an enemy we have to deal with in alcohol, and there is no drunkard who did not begin by taking drink in moderate quantities.

We entirely dissent when Dr. Druitt speaks of alcohol as among the class of stimulating foods. It is altogether different in its effects from the stimulation of any article of ordinary diet. Dr. Chambers says, "It is clear we must cease to regard alcohol as in any sense an aliment, inasmuch as it goes out of the body as it went in, and does not, as far as we know, leave any of its substance behind." (*Renewal of Life*, 1862.) Dr. Markham sums up a long and able discourse on Alcohol in the *British Medical Journal* in the following terms:—"It is, to all intents, a foreign agent, which the body gets rid of as soon as it can. Alcohol is not a supporter of combustion; part, probably the whole, of it escapes from the body, and none of it, so far as we know, is assimilated. It is therefore not a food in the eye of science."

Which is in the right? Dr. Druitt, who places alcohol as food, or the numerous authorities, who object to it as such? How stands the account between those who defend the ordinary use of alcoholic liquors—it matters not in what quantities, nor whether they be light wines, the principle is still the same—and the teetotaler? The latter appeals to facts about which there can be no mistake. It is proved that the common use of intoxicating

drinks has always led to drunkenness. In all ages of the world, and among all races of men, however modified by climate and other circumstances, wherever intoxicating drinks are in common use there drunkenness will be found. Universal abstinence would ensure, and this beyond dispute, universal sobriety. In the face of the evils of intemperance, it is urged, that if the drinks supply no proper want, if health and comfort and rational enjoyment are not promoted by their use, then it becomes a duty to abstain. The question remains, is alcohol good or bad as an article of diet? and, to the settlement of this question, Dr. Druitt has contributed nothing. It cannot be disposed of lightly, and the more it is examined, the more will it be seen that the abstainer has a principle which is at any rate safe, which if it be not incontrovertible, has never been successfully controverted, and which recommends itself to reasonable men much more than a moderation which no one is able to define.



## SIX YEARS IN A CORONER'S COURT.

WE have heard intelligent persons say that there is no necessity to tell the people about the evils of intemperance, because everybody is acquainted with them. We admit that there is a sort of vague knowledge on the subject; but, so far from the evils of intemperance being clearly understood, we doubt if any one fully appreciates the magnitude of those evils. How many, for instance, shall we find, who have anything like a clear idea of the disease and death caused by alcoholic liquors? At present "deaths from alcohol" are generally registered under some other designation; and even at coroners' inquests it is seldom that the verdicts reveal the true cause of death. If, however, the proceedings at the coroners' courts were more fully reported in the newspapers, and especially if coroners were to follow the example of Dr. Lankester, and publish annual reports, the public would have a greater knowledge of the disease and death caused by alcohol.

Dr. Lankester has held the office of coroner for the central district of Middlesex six years, and each year he has published a report of the inquests he has held. In his first report, for the year 1862-3, there is an account of 1,080 inquests. The causes of death in these cases are set forth in tables, with the headings—Deaths from natural causes—Deaths from accidental causes—Deaths from suicide—Deaths from homicide, infanticide, and manslaughter—and deaths from unknown causes. As we know

the use of strong drinks to be a great cause of disease and death, we have examined these reports in order to see how many deaths were ascribed to intoxicating drink; and, beginning with the table of deaths arising from natural causes, we found three attributed to exhaustion from habits of intoxication, and eighteen to diseases of brain, brought on, or accelerated by habits of intoxication. But we could not see how deaths, caused by habits of intoxication, could be termed deaths arising from natural causes. If intoxication were necessary, then the causes of these deaths might perhaps be termed natural with some degree of propriety. In addition to the deaths placed to the account of drink, many of the diseases named in the table as the cause of death are produced by strong drink. Disease of the heart, which kills suddenly in a great number of cases, is frequently found in persons who take alcoholic beverages to excess. The report says, "The condition of the arterial coats, which lead to the production of aneurism, is the same apparently as that of fatty degeneration in the heart, and arises from the same general causes of which drinking habits are the principal." Then, as to diseases of the brain and nervous system, the verdicts in eighteen of these cases refer the cause of death directly to intemperance. In the table of deaths from accidental causes, thirty-nine deaths are assigned to injuries from cabs, omnibuses, vans, drays, and horses; and a note to the table informs us that the majority of these cases are connected with habits of intoxication. Dr. Lankester, referring to the "run-over" accidents, from conveyances drawn by horses, says:—

"This does not always appear from the verdict, as juries are exceedingly indisposed to return verdicts of deaths caused by 'drunkenness,' unless the evidence is very strong indeed. In many of these cases the injury is frequently slight; but where a habit of drinking exists it brings on delirium tremens, of which the injured person dies."

There were seventy deaths from suicide; and Dr. Lankester states that, "In a large number of cases, habits of intoxication have preceded the act of suicide." Although the verdicts of the juries in these 1,080 cases attribute only between two and three per cent. of the deaths directly to intemperance, no one can doubt that the greater part of these deaths were really the result of the use of alcoholic drink.

In Dr. Lankester's second report there is an account of 1,271 inquests. Three deaths were from exhaustion from drunkenness, and eighteen from delirium tremens and drunkenness. Several accidental deaths occurred through building operations. Dr. Lankester's opinion is that a "state of intoxication is chargeable as the cause of a large number of such accidents."

The third report gives the results of 1,246 inquests held in the

year. In this report, in the table of deaths from natural causes, seventeen are ascribed to "exhaustion from weakness, and want of attendance, exposure and drunkenness." But cases of drunkenness and delirium tremens are returned under the head of effusion of serum and congestion of brain. The deaths from inflammation and congestion of brain were sixteen, and from effusion of serum, sixty-three. But it is not clear that all these deaths arose from the use of alcohol, although there is reason to believe that the greater part were deaths from drinking habits.

In Dr. Lankester's fourth report, out of 1,385 deaths twenty are ascribed to "exhaustion from weakness, want and exposure, and drunkenness ; five to delirium tremens, drunkenness, and other diseases of the brain." The report states that this cause of death is returned in the class of effusion of serum and blood on the brain, heart disease, &c., accelerated by habits of drinking. This arrangement prevents the possibility of stating distinctly in how many cases the juries have found that the deaths were occasioned by drinking. Dr. Lankester, adverting to this, says :—

" Another group of cases in these deaths from natural causes are those diseases of the nervous system, the heart, lungs, and abdominal viscera, which evidently arise from habits of intoxication. I have not given them in a separate table, as there is a considerable uncertainty in the verdict delivered, as compared with the evidence given as to the cause of death. In the year 1866 I find there were forty-seven cases in which verdicts were delivered directly connecting the death with excessive drinking. I have however the conviction that in a large number of the cases where persons have suddenly died or been found dead, and in which drinking is not referred to, that death arises from habits of intoxication. Few persons, except those who have studied the physiological effects of alcohol in the human frame, can form an idea of the extent to which this cause alone contributes to the deaths placed under the head 'natural causes' in the returns of the coroners' court.

Our observation convinces us of the soundness of Dr. Lankester's views, and we are sure that if the true cause of death were assigned by coroners' juries, or by medical men in their certificates to the registrars of death, a large number would be "deaths from alcohol." It will be some time, however, before the public or juries will recognise wine, malt liquor, or spirits, as destroyers of health and life. There is, at the present time, a disposition on the part of medical men, as well as on the part of non-professional persons, to attribute death to anything rather than to alcohol. There is a general acknowledgment of the injurious effects of bad air, of impure water, of unsound food,—but an unwillingness to place alcoholic drink in the same category. Dr. Lankester says :—

" A large number of cases returned under the head of 'congestion of the brain,' 'effusion of blood on the brain,' and 'effusion of serum on the brain,' are directly due to the immediate effects of over-doses of alcohol upon the system ; whilst a very large proportion of the cases which fall under the head of 'fatty

degeneration of the heart,' 'hypertrophy and dilatation of the heart,' and 'diseases of the liver and kidneys,' are due to the long-continued action of alcoholic drinks on the system. These are the direct effects of alcoholic beverages on the system; whilst under the head of accidental deaths, suicides, and even homicides, the terrible effects of this indulgence are seen in the bills of indictment which coroners' verdicts return against the drinking habits of society."

Owing to the deaths from drinking being placed under the head of the diseases arising from that as well as other causes, the fifth report names only nineteen cases of death from privation and drinking habits, and two from delirium tremens. Of course the number of deaths from indulgence in drink may have been as great as in other years, although not shown so plainly.

We now come to Dr. Lankester's sixth report recently published. In this report Dr. Lankester has given a table of "Deaths from excessive drinking." In former reports he included deaths from drinking under the head of natural death, as it is difficult to make out exactly whether death has been caused by habits of intoxication or not; and he repeats his conviction that it frequently happens, where sudden deaths have occurred to persons in the habit of indulging in drinking alcoholic beverages, that juries hesitate to append to their verdict the statement that the death has either been accelerated or produced by drinking habits, when there can be little doubt that such has been the case. This hesitation of juries to lay the blame on the drink, is not surprising, when the delusions which prevail respecting its wholesomeness and usefulness are taken into account. But in this report thirty-one cases are given in which verdicts have been delivered that death has been accelerated or produced by habits of intoxication. But Dr. Lankester says:—"It will be thus seen that such verdicts do not at all represent the real amount of death that comes before the coroner as the result of drinking habits." If it were possible to get correct verdicts as to the influence of drink, and to bring out prominently before the people of England the results of the investigations in all the coroner's courts of the country, the terrible array of facts would surely lead men to doubt the propriety of using drinks so productive of disease and death. Dr. Lankester, in another part of this report, says:—

"Even a large number of criminal verdicts have their origin in drunkenness. Falls in the street, falls from ladders and high places, with cases of run-over in the streets, are constantly traceable to inebriation. At least half the cases of death from disease of the heart, amongst the verdicts of death from natural causes, is due to habits of drinking. Even in persons who are not habitual drunkards, the injurious effect of alcoholic drinks on the system is revealed. Without having counted the cases, I should say that at least half the cases of suicide are traceable to that utter wretchedness of mind which is brought on by habits of drinking to excess."

We have gone through these reports for the special purpose of noticing the influence of alcohol in the destruction of life, and we have given copious extracts showing Dr. Lankester's opinions on this subject. The reports, however, contain useful information on other topics, and valuable suggestions for the improvement of the coroners' courts and the prevention of crime. Dr. Lankester is entitled to the thanks of social reformers for the publication of these reports, and when we consider the doctor's position as a man of science, and his experience as a coroner, we feel sure that the statements contained in these reports must have a beneficial effect. We want the people to see plainly the doings of drink, and when the evil results of drinking are fully understood, there will be a disposition to seek for a remedy.

The *Times*, of September 7th, contained an article founded on Dr. Lankester's sixth report. In this article we are informed that "the mortality consequent on drunkenness has its roots in moral and social defects, which must be cured, if at all, by the gradual process of education." What are the moral and social defects in which drunkenness has its roots? In our opinion they are chiefly — first, ignorance respecting the nature of intoxicating drinks; and secondly, the general use of these drinks by all classes of the community. These "moral and social defects" will never be cured by ordinary education. If they are cured at all, it must be by the gradual process of teaching the people the true nature of the drinks which cause drunkenness, so that they may understand the physical and moral evils flowing from their use, and the safety and advantages of abstinence from them. And in proportion to the spread of this temperance education will be the disuse of intoxicating drink, and a diminution of all the moral and social defects in which drunkenness has its roots.



## ALCOHOL IN TYPHUS FEVER.

THERE is still much to learn as to the best way of treating fever, but the evidence against the routine use of alcohol, especially the use of it according to the views of the late Dr. Todd, is now sufficient to convince us that the free use of alcohol is neither necessary nor useful. The successful treatment of typhus fever by Dr. Gairdner, of the Glasgow Royal Infirmary, and by Dr. J. B. Russell, in the Glasgow Fever Hospital, have clearly proved that Dr. Todd's views were erroneous, and the excessive use of alcohol pernicious. In an important paper by Dr. Gairdner it is stated that by using a quantity of spirits less than one-half, and a quantity of wine less than one-eleventh, of the quantity adminis-

tered in preceding years, there was a mortality far below the usual average. The average mortality from typhus in the hospitals of England is about 18 per cent. Dr. Gairdner has furnished the results of his practice, and it appears that under his system of treatment, in which alcohol is used with extreme caution, and in the majority of cases is not used at all, the mortality was less than 12 per cent.; whilst under the liberal use of spirits and wine the mortality was  $17\frac{1}{2}$  per cent. Dr. Gairdner states, as the result of his observation and experience :—

“ 1st. That it is possible to reduce the mortality of typhus fever, while withholding a large proportion of the amount of alcoholic stimulants usually given. 2nd. That this diminution of mortality may take place at all ages, but is most marked amongst the young. 3rd. That while at all ages the administration of stimulants ought to be very strictly guarded, as likely to prove injurious when in excess, it is demonstrable that young and temperate persons may be advantageously treated—*i.e.*, treated with a diminished mortality—*without one drop of wine or spirits being given from beginning to end of the fever, except in the rarest casualties.* 4th. That the principle of giving stimulants as a matter of routine in typhus—*i.e.*, at a certain stage of the disease, with but little regard to individual peculiarities—ought to be at once abandoned. 5th. That an approximation can be made to a more correct doctrine on the subject, though further researches are still required. 6th. That there is reason to think that in most hospitals, as well as in private practice, a very large needless expenditure is incurred through neglect of these facts—a consideration which, though secondary in importance to others, is by no means to be set aside as irrelevant.

Dr. Gairdner does not reject the use of alcohol, but endeavours to use it with reason; not as a matter of routine. He says :—“ I have been throughout guided in the use of alcoholic stimulants by the conviction that they are really *stimulants* and *tonics*, *i.e.* *medicines*, and not food properly so called.” It will be a great point gained when medical men generally recognise the difference between “ food properly so called,” and stimulating or narcotising drinks. The late Dr. Todd considered alcohol to be a valuable form of hydro-carbon food, and the practice founded upon this idea was to give alcoholic stimulants at an early period of acute diseases, and in frequently repeated doses all through the day and night. The hospital practice of Dr. Todd in fever was not very large, but as far as the figures go, the results appear very unfavourable. In cases of typhus the mortality was 25 per cent.; and in cases of enteric fever more than 20 per cent.; and his results were worst in the young. Now, typhus fever is not by any means so fatal to the young as to adults, and Dr. Gairdner gives the details of 189 unselected cases of the young treated without stimulants, in which the mortality was less than 1 per cent., “ while, in the hands of Dr. Todd, under a routine of such extreme stimulation as is indicated in his book on acute diseases, it seems probable that instead of *one death* in the 189

cases, there must have been no fewer than thirty to thirty-five ! ” As far, then, as experience and statistics go, the superiority of the reduced use of alcohol over its liberal employment in fever seems fully established.

Dr. Todd's theory was that alcohol “ possesses its stimulating property because it is a form of aliment appropriate to the direct nourishment of the nervous system, and to its preservation ; and its special adaptation to this system gives it an immediate exciting power superior to any other kind of food.” (“ Clinical Lectures on certain acute diseases,” by R. B. Todd, M.D., &c., p. 458.) Having adopted this view of alcohol, Dr. Todd advocated its liberal and early use in acute disease, and maintained that it was better to err on the side of over-stimulation than not to give enough. But there is no scientific foundation for Dr. Todd's theory. He never furnished any kind of proof that alcohol improves the nerve cell or tissue in any way. The theory rests, not upon demonstrated facts, but upon conclusions drawn from imaginary data. All the phenomena produced by alcohol, when taken in sufficient quantity to exhibit its effects, show that it can disturb the nervous system, but there is no evidence that it is a “ form of aliment appropriate to the nervous system.” Theories, however ingenious, are of little value unless borne out by the results of practical experience, and experience certainly does not support Dr. Todd's views respecting alcohol.

Dr. J. B. Russell, physician and medical superintendent of the City of Glasgow Fever Hospital, who is an opponent of Dr. Todd's doctrines and practice, acts upon the principles of Dr. Gairdner, and when he employs alcohol does so with the greatest caution and discrimination. In 1867 he published “ A Clinical Study of Stimulation in Typhus, with incidental remarks on its Natural History.” In this work he shows the contrast between the views of Dr. Todd and Dr. Gairdner, and furnishes abundant proof of the soundness of Dr. Gairdner's theory and practice. Dr. Russell does not enter into a discussion of any of the purely chemical or physiological questions connected with the use of alcohol, and says it would not influence his practice in the least, although it could be demonstrated that every drop of alcohol is assimilated and detained in the tissues, or that none of it is assimilated. He takes altogether a practical view of the use of alcohol, which he employs, not as food, but as a stimulant, and with as much care as any other medicine. He says :—

“ We believe that we cannot employ alcohol as a food without also developing its dangers as a narcotic, and consequently that we must resort to those substances more commonly known as food—beef-tea, milk, arrowroot, &c. To these aliments, but not to alcohol, we may apply the proposition, and prefer giving too freely to a system of depression. If I am convinced of having done good by giving alcohol as a stimulant I am convinced of having done

harm; and I am quite as conscious of having benefited the patient by stopping stimulants as by administering them, even in the same case when they had been too long administered."

Dr. Russell gives the cases of 1,538 patients treated—of these 645 were stimulated; so that 58 per cent. were treated without stimulants, which he says is about the proportion treated without stimulants in other hospitals. One thing worthy of notice in the cases treated with stimulants in the Glasgow Fever Hospital is the small quantity used. The average total quantity consumed by all cases is twenty-two ounces of wine, and nine and a half ounces of spirits; the average total cost being 2s. 10d. The small amount of alcohol used shows that it was really used as a medicine and not as an aliment, or as a *placebo*. We have received the Report of the Glasgow Fever Hospital for the year ending 30th of April, 1869. The total number of patients admitted in the year was 1,240, and the average "direct" expense of treatment per patient was 9s. 1 $\frac{3}{4}$ d. Dr. Russell says:—

"The items of this expenditure are interesting in their relative proportion, and afford an instructive illustration in little of the principles on which fever is now managed. Of the 5 $\frac{3}{4}$ d. expended on a fever patient per day only 1d. is spent on stimulants and medicine; the rest is spent on food. This has all along been with little variation the proportion."

It would be well for patients if in all cases alcohol were used with the same discrimination as at the Glasgow Fever Hospital. There Dr. Anstie's theory, that alcohol is a stimulant in small doses, and a narcotic in larger doses, is fully recognised; and whilst it is sometimes used as a stimulant, great care is displayed to avoid using it unnecessarily, or in such quantities as to narcotise the patient. Dr. Russell says:—

"Alcoholic stimulants are a two-edged sword in the hands of the practitioner. If employed within the range of their stimulant action, *which is variable for every case*, they are helpful; if pushed beyond into their narcotic action, they impair the vitality which it is our aim to augment; even as pure stimulant they may be used unnecessarily, so as to push and urge the labouring energies of the system, maintaining an unnatural excitement in a journey which would with leisure have been more easily accomplished. In any case this definite journey lies before the fever patient. Whatever the advancement of knowledge may add to the power of the physician, certainly, at its present stage, treatment has no efficiency except as ancillary to the vitality of the patient."

The patient requires support to enable him to bear the trials of the journey, to carry him successfully through all its difficulties and dangers. Will alcohol furnish this support? Dr. Chambers ("Lectures chiefly Clinical," 4th edition, page 82) says:—"The physician sees that a large supply of nitrogenous material must be wanting. The nitrogenous tissues are devitalised, are drained away dead in a disproportionate excretion of used and other organic compounds, and nothing is taking their place." Now it is

certain that alcohol cannot replace the wasted nitrogenous tissues. This can only be effected by *proteids*, such as are contained in beef-tea, milk, and other "food properly so called." Dr. Chambers places great dependence upon milk. He suggests that no "meals" should be given, but small doses of nitrogenous aliment very frequently. He says:—"The suitablest food is that which is naturally supplied to the weakest stomach. The feeble digestive organs of babies can assimilate milk, and milk forms the most appropriate nourishment for the debilitated viscera of the fever patient." We can fully confirm Dr. Chambers's views as to the utility of milk in the treatment of fever, and chemistry and physiology also show that milk can furnish the restoratives of the wasted tissues, which cannot be done by alcohol.



## ASYLUMS FOR THE INTEMPERATE.

THAT the intemperate use of alcoholic drink is the effect of alcoholic derangement of the nervous system is beginning to be generally recognised. And when this is clearly understood, when the drunkards and other persons who have an intense desire for alcoholic drinks, are recognised as the victims of disease, we may expect to see more interest taken in the efforts made by temperance reformers to prevent and cure drunkenness. The most superficial observer must see that when a man is in a state of *delirium*, or *coma*, produced by alcoholic drink, he is in a diseased condition, but it requires more penetration and medical experience to discover that the intemperate use of strong drink is a disease, and that it can only be cured by abstinence from alcohol. When the use of strong drink has caused other derangements of health besides intemperance, the aid of the physician is generally sought, but the fact that the excessive use of the drink is the effect as well as the cause of disease is not generally known, and hence the importance of the medical treatment of the habit of inebriety is too often overlooked. Of course temperance reformers are convinced that intemperance is one of the evil consequences of the general consumption of alcoholic liquors, and they proclaim, as an absolute specific for this disease, abstinence at once and for ever from all alcoholic drinks. This simple remedy for the intemperate has proved effectual in thousands of cases, some of which were apparently of the most hopeless character. And it is quite clear that, if the victims of intemperance cease to use alcoholic drink, they will escape from the evils flowing from its use. But though abstinence is such a simple and effectual remedy for intemperance there are many persons

who, from hereditary predisposition derived from their drinking parents, or from the derangements of brain and nerves produced by the use of alcoholic drink, are so infirm of purpose, so weak of will, that they have not strength of mind sufficient to enable them to persevere in the practice of abstinence from strong drink. To meet the case of these persons asylums have been established in America with the most beneficial results. One of the most efficient of these institutions is the New York State Inebriate Asylum at Binghamton. The buildings are owned and kept in repair by the State. The institution itself is self-sustaining. A certain percentage of all the money received from the excise law goes to the asylum, and is expended on the buildings and grounds. It offers a refuge to men who wish to reform. "There are three classes of patients: first, those who pay first-class fare, which is twenty dollars a week, including board, washing, and medical attendance; a second class who pay ten dollars a week; and a third class, who are free. There is no difference in the rooms or board of these classes, and no one is allowed to know who pays first-class, and who comes free." The building is splendid, and seated in beautiful grounds, and "no hotel in New York has better bedrooms, or more handsomely furnished." Among the patients are men of first-class position and talent. It appears that no coercion is used, the whole discipline being Christian influence, and reliance on the honour of the inmates. The patients are put under a course of medical treatment. "Not a drop of alcohol is allowed to be used in any way." About ninety per cent. of all the cases are permanently cured. Lieut. Manning, of the 47th Regiment, now resident in Halifax, N.S., paid a visit to the asylum, and has furnished an interesting account of the institution. He found "eighty-two patients under treatment, men only, and generally of a superior class, including seven doctors and three ministers." Some persons imagine intemperance to be confined to the low and uneducated, but this is a great mistake. The use of alcoholic drink can derange the nervous system of the educated as well as the nervous system of the ignorant. Poisons act in the same way upon the high as upon the low, and alcohol is no exception. Any one who supposes that the effects of alcohol are confined to the lower classes, can have but a limited acquaintance with the condition of the other classes. Lieutenant Manning states that—

"Most of the inebriates, on admission, sign a paper stating that they voluntarily place themselves under restraint, and moreover they solemnly promise not to take any liquor whilst at the asylum, and immediately they are admitted they become abstainers. 'We knock it right square off, and allow no tapering-off here,' said the assistant doctor to me—and indeed it has been found that it is almost impossible for the patient to leave it off gradually, and moreover, that one who has been an inebriate or dipsomaniac can never again

drink in moderation, for the disease is only slumbering within him ; but the longer he abstains the less desire has he for it."

Lieutenant Manning expresses an earnest hope that Government inebriate asylums may soon be established in all countries where drunkenness is the great cause of poverty, disease, and crime. There are many thoughtful men who are of opinion that such asylums ought to be established in England. There are others, too, who would have the law altered so as to give the relatives of confirmed inebriates the power to place them under restraint—in fact, to treat drunkenness or dipsomania, as a form of insanity. This view of the way to deal with the drunkard was maintained in a paper by Dr. Symonds, read at the meeting of the Social Science Association at Bristol. Dr. Symonds said—

"From all that I have seen and known, and from all that I have read on the subject, I entertain no doubt whatever that he should be so treated ; that a person who cannot, or who does not, resist temptations to put himself frequently into a condition which, for the time being, is indistinguishable from insanity, should be liable to the laws affecting lunatics, and in fact to the deprivation of the liberty of which he has proved himself unworthy. I can see no reason why it should not be certified of such a person that, because of his proved habits of intoxication, and all that is involved in those habits, he is, according to the legal formula, a person of unsound mind and fit to be confined."

Dr. Symonds also advocated the punishment of drunkenness. He thought "it would be no little good if, through a sterner action of the Government, drunkenness could be denoted and defined, and denounced as a crime." Dr. Gairdner, of Glasgow, also furnished a paper for the Social Science Congress, in which views similar to those of Dr. Symonds were enunciated. These papers are signs of the times ; they show that there is a growing conviction that drunkenness is a national evil, and that it is time to take effectual steps for its repression. Our hope, however, is not so much from legislation as from Christian benevolence and personal effort. We have great faith in moral suasion and the power of kindness, and would rather see steps taken to cure the intemperate than to punish them. Who are the intemperate ? They are of both sexes, and of all classes of society. They never intended, when they commenced the use of alcoholic drink, to become inebriates, but by the use of drinks considered "good" and "wholesome"—drinks consumed by all classes—they have become what they are. Shall we seek to punish them, or to reclaim them ? Is the deranged condition of the nervous system which is termed "dipsomania" curable ? We believe that it is. We have seen the most inveterate cases cured without punishment, or any kind of coercion. Every temperance society can show its trophies in the reformed drunkards who have been saved from intemperance by voluntarily giving up the use of strong drink. There may, indeed, be a few persons whose faculties are so

enfeebled, either from the intemperance of their parents, or from their own drinking habits, as to be incurable; but we are convinced that the great majority of inebriates may be cured. In the case of some there may be a necessity for places of refuge, away from the temptations of old associations, and where, by judicious treatment, health of body and mind may be restored. Hence the establishment of inebriate asylums, where the intemperate may voluntarily place themselves for a time, would be beneficial. We have no hope that the Government will erect such asylums, or devote a percentage of the excise to their support. A few private homes have already been established, where the intemperate are received and aided in their efforts at self-reform; and if such institutions are to increase in this country, they will owe their origin to Christian philanthropy. We have general hospitals, and special hospitals, and institutions for the relief of almost every form of human suffering, and the establishment of inebriate asylums will be in accordance with the benevolent spirit of our country. But whether the diseased conditions which cause the intense desire for strong drink be treated in private or in asylums, and whatever means may be employed to restore the general health, there is but one remedy for "dipsomania," and that is total abstinence from all alcoholic liquors. This is no new discovery. Dr. Trotter, more than sixty years ago, in his book on "Drunkenness and its Effects on the Human Body," says, "With drunkards, therefore, my opinion is, and confirmed by much experience, that wine, malt liquor, and spirits, in every form ought *at once* to be taken from them." It is by the advocacy of this principle that temperance societies have reclaimed so many of the intemperate; and by teaching the dangerous nature of alcohol, and the advantages of abstinence, they have preserved many from acquiring the habit of using strong drink.



## STRONG DRINK IN HOSPITALS.

THE use of intoxicating drinks in hospitals is a subject requiring investigation, for although these drinks are largely used, there seems to be no scientific rule for their administration. Whether intoxicating drinks are prescribed from routine, or caprice, or under what other influence, we will not presume to say; but from what we know of their consumption in hospitals and other public institutions, we are convinced that these drinks are not ordered as the result of an inquiry into their chemical and physiological properties. If they were prescribed upon scientific principles,

either as medicines or as articles of diet, it might be supposed that there would be something like uniformity in the proportion used in the different hospitals. This, however, is not the case, as there is the greatest difference in the quantity consumed in various hospitals. The President of the Statistical Society, in an address at a recent meeting of that Society, suggested that "periodical returns should be furnished by hospitals in the metropolis and large towns, of such a nature as will admit of a comparison of the efficiency and cost of relief in each." If this were done, the great amount of money spent in strong drink would be clearly seen, and would lead, we think, to an inquiry as to the necessity for such a large expenditure in inebriating drinks.

The *Lancet*, of December 11th, 1869, called attention to the extravagant expenditure at St. Bartholomew's Hospital, compared with the expenditure at Guy's. It appears that the average number of in-patients at Guy's is 500, and at St. Bartholomew's, 553; that is in the proportion of about 5 to 5½. But the money expended in wines and spirits, and other things, is not in the same ratio. The expenditure for the year 1868 was as follows:—

GUY'S HOSPITAL.

Wine and spirits - £693.

ST. BARTHOLOMEW'S.

Wine and spirits - 1,659.

There was also a great excess in other things at St. Bartholomew's over Guy's. The *Lancet* says:—

"But the greatest excess occurs in the item wines and spirits, which cost more than double what they do at Guy's, and show an excess of nearly £900. Is it not a rational supposition that there is something wrong either in the in-coming or going-out of these several articles, since it is much more difficult to think that they can be legitimately consumed? But supposing that they are, does it relieve the management, staff included, from the charge of extravagance? We think not."

If this great quantity of wine and spirits were really necessary for the patients at St. Bartholomew's, what a sad state the patients at Guy's must be in! But no one will pretend that the patients at Guy's were not as well cared for and as successfully treated at that hospital as the patients were at St. Bartholomew's. Some writers have assumed that alcohol acts like food; and others, who do not go so far as this, assert that it prevents the waste of tissue, and therefore renders less real food necessary. The use of alcoholic liquors at St. Bartholomew's Hospital does not support these views, for not only was there an excess in the wine and spirit merchant's bill, but also in the baker's, butcher's, and cheesemonger's. It would be interesting to learn who consumed all the wine and spirits, and how much of it was given to "hospital birds," and "malingerers." At a time like the present, when there appears a want of sufficient hospital accommodation

for the sick poor of the metropolis, extravagance and a waste of the money intended for the relief of the sick ought to be condemned by every friend of justice and humanity. The public who give their money for the relief of the sick and afflicted have an undoubted right, and indeed it is their duty, to see that their money is properly expended. And in the case of endowed hospitals, if the press and public opinion cannot induce the governors to correct the abuses which exist, an appeal to the Legislature may be necessary. The *Lancet* justly observes that,—

“As regards the ordering of wine and spirits, the staff ought not to consider it as undue interference when their attention is drawn to excessive consumption and expense. There is often a sort of fashion in these practices, as if the hospital's reputation were at stake, and even the staff acquire a sort of indefinite notion that stimulants must be largely given in order to keep up their list of cures. But surely a comparison like the one we have just given ought to disabuse their minds of this delusion. The surgeons of Guy's are not in the least restricted, and yet they order only one-half of the wines and spirits which are given at St. Bartholomew's. In such a case, it appears to us, the management is bound to interfere.”

Although the quantity of wine and spirits consumed at Guy's was much smaller than what was consumed at St. Bartholomew's, we think there is reason to question the necessity for the use of even the smaller quantity, and we have no doubt that the light diffused by the practice of abstinence by increasing numbers of all classes of society, combined with the increase of chemical and physiological knowledge, will render the use of strong drink in the treatment of the sick “smaller by degrees and beautifully less.” We suppose no one will assert that all the strong drink used in hospitals is legitimately employed. The *Lancet* acknowledges that—

“So much is left to dressers and house-surgeons, who have but small experience, that the greatest advantage arises from the occasional hints of an experienced and watchful officer. Even the staff frequently continue the use of wines and spirits longer than needful, from simple inattention, and occasionally they order them to an extent which a little consideration would reduce.”

And we add, that they are frequently ordered when there is not the slightest necessity for their use, and when they are more likely to inflict injury than to impart benefit. Of course we do not expect that our ideas as to the medical use of alcohol will meet with universal acceptance; custom and appetite stand in the way; but we have full faith in the soundness of our views as to the general uselessness and frequently pernicious influence of the use of strong drink in disease. Dr. John Charles Steele, in a paper on “Hospital Dietetics,” says that “Whatever Temperance advocates or social science may say to the contrary, I feel convinced that if we desire to reconcile our patients to the hospital regime, and afterwards facilitate their convalescence, we

must supply them with a moderate amount of their favourite beverage." According to this, the drink must be given to please the patients. It reconciles them to the rules of the hospital. It gratifies their appetite for alcohol ; and these are the reasons (perhaps the best that can be given) for the ordinary use of strong drink in hospitals. There are, however, signs of reform. The nature of alcoholic liquors is better understood than formerly ; and the number of persons who have ceased to use strong drink is constantly on the increase. Many medical men, too, have ceased to recommend alcoholic liquors, and there is a growing public sentiment in favour of abstinence. There is ground, therefore, to hope that the extravagant use of alcoholic liquors in hospitals will be given up, and that these liquors, if employed at all, will be used only in cases where they appear to be necessary, and not be given from routine, or to please the patients. The use of strong drink in hospitals is not only objectionable on the ground of the money wasted in the purchase of the drink, but also because of the bad moral effects of its use. Patients and their friends are led to form erroneous views as to the value of strong drink, and to conclude that it is essential to health and strength. In this way some are induced to begin drinking intoxicating liquors ; others think it necessary to increase their quantity ; and thus drinking habits are created and perpetuated through the use of alcoholic liquors in hospitals.



## BEER *VERSUS* RHEUMATISM.

BY H. MUNROE, M.D., F.L.S., &c., Hull.

HAVING, some years ago, had my attention drawn to numerous cases of rheumatism affecting the wrist-joint in a class of persons engaged in a similar occupation, and believing that this affliction arose, in a great measure, from an error in diet, I was anxious to learn whether my conclusions were correct or not as to the cause of the disease. The persons I allude to were engaged in the laborious occupation of carrying on their backs large sacks of corn from vessels, up long ladders and planks into warehouses above. These sacks of corn would be about fifteen stones in weight, causing to the carrier a great strain on the muscles of the back, but more especially on the muscles and tendons of the right fore-arm and wrist. The left hand was only sparingly used to guide the carrier up the ladder, or otherwise to support the sack. The corn carriers, during their work, were generally thinly dressed, wearing only shirt, thin calico drawers,

stockings and slippers; and, as might be expected, perspired a great deal during their labour, especially in the summer time. Perspiring freely of course compelled them to drink freely; and, as beer was their favourite drink, a carrier would, during a day's labour, swallow many pints of this intoxicating beverage. Indeed, it would be a difficult task to persuade a carrier that he could perform his work at all without sundry long draughts of his favourite drink.

I attended, during the summer of 1865, about a dozen of these corn carriers, all suffering from sub-acute rheumatism in the wrist-joint of the right arm, which led me to suppose that there was something more than the nature of the occupation the true cause of their suffering,

Take the following case as a sample of the rest:—

A. B., a corn carrier, about five feet eight inches in height, a strong, well-built man, muscular system well developed, about 35 years of age, complexion ruddy but rather beerified, the system altogether evincing a slight tendency to fatty degeneration, complains of rheumatic pains in the right wrist and tendons of the fore-arm. On closing the fingers, or grasping anything tightly with them, a grating sensation is felt, and even heard, in the tendons. There is little or no swelling or redness near the wrist, but it is painful, especially after the day's labour.

Ordered—Blue Pill, with Ext. Acet. Colch., at bed-time; to be followed in the morning, with Haust. Niger one ounce and a half, containing also Tr. Colch. gts. xx., so as to insure three or four free evacuations. A mixture of Potass Bicarb. Tr. Colch. and Sp. Æther Nit., to be taken during the day. The wrist and arm to be fomented with hot water, in which Potass Bicarb. has been dissolved, covered with flannel, and supported in a bandage. The patient to be put upon a milk diet, and all malt liquors suspended. In a few days the pain had abated, and the grating sensation much lessened. After a week's attendance the patient had recovered so much as to have added a little bitter infusion to his mixture. In about three weeks he was convalescent and able to resume his work.

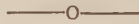
In all the cases treated, total abstinence from alcoholic liquors was strictly enjoined. Four or five of the patients treated by me continued to practise total abstinence, and have not since suffered in any way from an attack of rheumatism. Moreover, they have discovered that they could perform their arduous labour of corn-carrying with much more ease and comfort, and enjoy better health under a total abstinence regimen, than they ever could before. Some of the other patients, continuing their use of beer as formerly, have had repeatedly to apply to me for medical assistance, suffering again from rheumatism in the wrist. I therefore could

arrive at no other conclusion than that this use of beer, often in quantities of many pints per diem, was the cause of the blood becoming surcharged with urates, was a hindrance to the healthy process of digestion, was damaging to the healthy operations of the kidneys, lungs, and skin, and the *fons origo* of the attacks of rheumatism; more especially as those who abstained had no recurrence of the disease, whilst those who persevered in the use of beer still suffered.

I have had to treat many cases of lumbago in the same class of persons, and have also observed that total abstinence from malt liquors rendered them less liable to a recurrence of the disease.



## Miscellaneous Communications.



### DRUNKENNESS IN INDIA AND ITS REPRESSION.

BY C. A. GORDON, M.D., C.B., *Deputy Inspector-General of Hospitals.*

THE vice of drunkenness has unfortunately ever been the bane of the British soldier, whether on foreign service or at home. Much has of late years been effected with a view to mitigate this great evil, but nowhere more than in India, and it is satisfactory to know that the result has been an improvement in the habits of the men, so great that intoxication, far from being of common occurrence, is now comparatively rare among them. I would desire in the following remarks to indicate some of the measures by which this happy consummation has been attained, but, in so doing, must allude to the condition of the vice from time to time to the mitigation of which the measures in question were directed.

Beginning my observations with the year 1833, I take as an example what is recorded in regard to the 31st Foot, then stationed at Kurnal. It is stated that such was the extent to which drunkenness prevailed in that regiment at the period in question that "no rule, regulation, or order issued on the subject appeared to have the effect of putting a stop to it." [The

quantity of spirits which by clandestine means was obtained from the canteen—then an establishment but recently instituted—was but "a mere trifle as compared with what was obtained from other quarters." (a) For example, we find it expressly stated that many of the married women sold brandy, rum, gin, and arrack, in a manner publicly, "and, moreover, that those liquors, some of the most deleterious description, were always to be had in the bazaars, and also in the cantonments of the Company's European artillery." In fact, the custom of mixing narcotics and other deleterious drugs with liquors clandestinely sold to the troops had existed for many years. It attracted the attention of the authorities in 1827, and probably there may be readers of these remarks who remember the time when old soldiers in India, to increase the pungency of otherwise hot and irritating liquor, added red peppers to their arrack.

At some stations the facilities for

(a) General Report for 1833, pp. 212—219.

obtaining spirits clandestinely were peculiarly great. At Chinsurah, for example, it was reported (*b*) that "the new barrack, which is one long line of building, 750 feet in length, with an open verandah all round, being without enclosure of any kind, it was quite impossible to prevent men from rambling abroad at any hour of the night or day." It was, however, recorded that the barrack was situated in the centre of the cantonment, with two very extensive bazaars in its close proximity, in each of which are several shops licensed by Government for the sale of arrack, dharoo, (*c*) and other deleterious spirits, which are sold at so low a price that a soldier may on any one of them get drunk for two or three annas, the average balance of his day's pay. At this time a number of old soldiers who had but recently volunteered from the 14th Foot, were temporarily detained at Chinsurah, and with reference to them Dr. Burke remarked that, with such opportunities and facilities as he had just described, "it cannot be considered matter of surprise that old soldiers, separated from the head-quarters of their corps, should indulge liberally in their favourite habits of intemperance."

Dinapore was another station noted in those days for the facilities it afforded the soldiers for indulging in drunkenness. Adverting to them, Dr. McLeod observed that it was by no means extraordinary that the station should be remarkable as an unhealthy and drunken quarter for troops, adding that "everything has been done that zeal and ingenuity can devise" to check the evil, but without success. "All commanding officers," he further observed, "who have had the misfortune of being quartered there, have failed to limit the evil, and even the Brigadier-General is not privileged to interfere. His authority extends only within military bounds, and the bazaar and several villages are so close to cantonments that preventing the in-

troduction of forbidden articles is perfectly hopeless," because "the whole control beyond their limits is exercised by the civil authorities," who are *bound to protect* the sale of spirits, and will, of course, support the vendors against the representations and complaints of officers, who are therefore powerless. (*d*)

At the period of which I write it is evident that to be intoxicated was the rule, to be sober the rare exception. Dr. McLeod reported (*e*) with sorrow that "a system of drunkenness among the men and their wives prevails to a most appalling degree, and is the very fertile source of disease." To check it was impossible, for it "seemed to have extended to those whose station in society should have induced them to set a better example to their military inferiors"—a sentiment which shortly afterwards found confirmation in the views expressed by Sir C. Napier (*f*) "The great disease with officers and men," so he wrote, "is *drink*, but," he adds, "the soldiers drink more liquor" than the officers—a circumstance which would seem to imply that this was the only difference between them.

As already observed, a quantity of rum, varying according to station from one-tenth to one-twentieth of a gallon, was then issued to the soldier in India as a portion of his daily ration, one-half being usually consumed in the early morning, the other at mid-day. The former was for the most part given before going to drill, or during the prevalence of foggy weather, (*g*) under the impression that spirits acted as a prophylactic against malaria. There were, moreover, occasions when indulgence in drink was rather encouraged than otherwise, as, for example, when volunteering of men to other regiments was taking place, when prize money was issued, and during the prevalence of an epidemic. Let us, for example, observe what is recorded

(*b*) Report for 1830, p. 309.

(*c*) Obtained from the petals of the *Bossia latifolia*, N.O. Sapotaceæ.

(*d*) Report for 1836.

(*e*) Report for 1835, p. 301.

(*f*) "Conquest of Scinde," p. 530.

(*g*) Report for 1830, p. 314.

of the 14th Foot, when that regiment gave its volunteers in 1828. On that occasion (*h*), "a scene of drunkenness and consequent irregularities ill calculated for the preservation of health took place." "The men continued for five or six days to drink, it is understood, at the rate of about 100 gallons of arrack per day"—that is probably at the rate of an eighth of a gallon of the spirit while the carnival lasted. This quantity, however, was probably not large, considering the capability of the soldier of the period for his potations. Thus, it is recorded of James Spilman, 38th Regiment, that he could drink at a sitting eleven quarts of foetid toddy, and, moreover, that he had won wagers by so doing; but the exploit was as nothing compared to that of two soldiers of the 13th Foot, who, between them, drank at Dinapore thirty-two quarts of the same liquor in one day. (*i*)

"Periods of issue of batta to the troops," so wrote Dr. Clarke, so lately as 1847, "are invariably times of disease and mortality. The Sutlej batta also could count its deaths," and he then alludes to one commanding officer who, hopeless to prevent intemperance, directed its course with the best consequences. He persuaded his regiment "to get drunk like gentlemen on champagne," by which means, to quote the words of the report, a short-lived, exhilarating, but expensive debauch was substituted for a protracted course of intoxication. (*k*)

The responsible medical officers were not slow to urge upon the military authorities the many evils in the form of disease and crime that arose from the prevailing drunkenness. In 1827, Dr. Burke adverted to the pernicious results of issuing a ration of spirits to the soldier, and in his report for 1830 he commented severely upon the facilities at Chinsurah for soldiers quartered there to indulge in habits of

intoxication, adding that "scarcely a man came to hospital for many months who had not been drinking without a pause for some days;" (*l*) while many acknowledged that they had not been quite sober for a fortnight, for a month, or for three months. He remarked that "the individual who lives in a tropical climate, and is in the habit of drinking spirits, will sooner or later die of an abscess in the liver, and if he be much exposed to the sun, the more certain and the more early will be his end, probably by fever, or affection of the head, or inflammation of the bowels, before the abscess has had time to form;" (*m*) and in the same report he expressed himself as satisfied that if ardent spirits were withdrawn altogether throughout the army in India and elsewhere, the health of the soldier would be more improved by the measure than by all the other means that could be devised.

It is recorded that in 1833 (*n*) four-fifths of the disease in the 31st Regiment was attributable to drink, and that of fifteen men of the corps who died during the quarter ending Sept. 30th, ten had been, previous to their illness, in a state of constant and excessive intoxication. Nor was it alone to long-continued heavy drinking that injury to health was at all times attributable; quite as much, if not more, actual danger having then, as more recently, been found to arise from the habit of tippling. "The maxim may be held as almost established," so wrote Dr. Burke, "that a certain indulgence in the constant use of spirits will prove fatal by delirium tremens, liver complaint, and dysentery, and the mode of drinking that most readily gives rise to the former disease is the constant dram-drinking, which keeps up a state of excitement short of drunkenness, not wholly inconsistent with the performance of common duties. This system of tippling, when connected with mental anxiety or irritation, is considered

(*h*) Report for 1828, p. 56.

(*i*) Inspector-General's Report, 1829, pp. 59. 60.

(*k*) Ditto, 1846-7.

(*l*) Report for 1830, p. 309.

(*m*) Report for 1832, p. 46.

(*n*) General Report, p. 219.

much more dangerous than a fit of drunkenness which is followed by nausea and vomiting, general debility and collapse, by which nature throws off the accumulation of poison that oppresses her, and gives time for the establishment of healthy action." (o) In 1836, Dr. McLeod recorded his views that intemperance and recklessness were the banes of Britons in India, and were in a peculiar manner the destruction of the British soldier. "The Government," he added, "will not see this, and they issue spirits to the troops to bring about" the state of mortality and inefficiency on which he was commenting. "I am quite willing to believe," he added, "that the unfortunate practice of Government issuing the dram had its origin in the best intentions, and from a mistaken idea of its effects on health; but it has long been known that spirits are prejudicial under most circumstances, and under all unnecessary. The evil," he continues, "is not so much in the immediate effect of the dram as in that it lays the foundation of habits which lead to destruction of the soldiers as men, and to their utter uselessness as defenders of their country." But he went further than this; he pointed out to the local authorities that the imperial government had discontinued the use of spirits to troops on board ship, they receiving in lieu beer or porter, which is not only more wholesome, but is preferred by a large majority, by all, in fact, but the old soldiers;" (p) nor should the fact pass unnoticed, that among the measures recommended by a royal commission twenty-three years after the date of Dr. McLeod's report was "that no spirits be issued to troops on board ship (between England and India) except on the recommendation of the medical officer in charge." The recommendation of Dr. McLeod had doubtless long before passed into oblivion.

One more extract must here suffice. The surgeon of the 16th Lancers, in his report for 1836-7, observed that

as in all other corps, "drunkenness was the cause of two-thirds of the diseases admitted into hospital; it is more general among the old soldiers and those who have volunteered from other corps than among the younger men." Let us now briefly allude to some of the measures proposed from time to time with a view to mitigate the conditions above described. Dr. Burke, in his report for 1827, adverted to various circumstances which, according to his view, acted prejudicially on the health of the soldiers, observing that he had brought them under the notice of the military authorities, and then expressed himself thus: "I still more strongly represented the bad effects of the ration of spirits to the soldier, and the necessity of substituting an equivalent of money for it, and urged the establishment of canteens to be strictly conducted on approved rules and regulations; that it was necessary they should be always provided with a sufficiency of wholesome wine and malt liquors, which the soldier might purchase and drink there at the cheapest possible rate; for, if they could be once induced to relish wine or malt liquor, I thought they might be got to relinquish the use of spirits altogether." Three years afterwards, however, this medical officer had to express himself thus: "It is well known that drunkenness, the besetting sin of the British soldiery, has hitherto resisted every attempt to keep it within bounds, and will most probably continue to do so until the soldier becomes a better instructed man, until he imbibe some little portion of the improving spirit of the age, and hold a more elevated rank in the scale of moral and intellectual beings." (q) Dr. Burke was in his views far in advance of his time. Four more years pass over, and he reverts to the theme. "It is to be lamented," so he wrote, "that excessive drinking should continue to be the prevailing vice of the men;" and, referring especially to the 38th Regiment, he added, "Most of the men have been some years in the country, and the habits of

(o) Report for 1834, p. 64.

(p) Report for 1836.

(q) Report for 1829, p. 239.

intemperance are too well confirmed to admit of a change by any species of restraint or variety of punishment," adding that they "see their comrades daily suffering from disease originating in drunkenness, and sinking into premature bodily imbecility from no other cause; but they see this with indifference, and pursue the same destructive course, unchecked by any fears for the future consequences, or utterly regardless of them."

"Much has been done by Government," so wrote Dr. McLeod in 1836, "to protect the soldier from injury by climate and weather, and, so far, his condition is in a progressive state of amelioration. But to cure the old soldier of his bad habits, or to prevent the young one from acquiring the vices of his predecessor, little aid has been or is given." Perhaps these remarks were somewhat too sweeping, considering that schools, libraries, and savings-banks had already been some years in operation in India; but it must be confessed that these alone were inadequate to diminish the prevailing vice of the army. One measure that was recommended, however, was so peculiar in its character as to deserve to be specially noticed. "In one regiment (*r*) the surgeon invited all the convalescents in hospital to attend in the surgery, where he showed them the inflamed and diseased stomachs of several of their comrades who had died by illness induced by drink."

When the measure was first contemplated of withdrawing the ration of spirits from the soldier in India, giving him a money allowance in place of it, fear was naturally enough entertained that the money so given would be expended in the purchase of native bazaar liquor of a very deleterious kind. Canteens were therefore, in 1828, instituted, with a view to avert this anticipated evil. In those regimental establishments it was intended that the men should obtain a limited quantity of good spirits for the sum allowed in lieu of that taken from them; and one of the first effects

produced was that a stop was put to the system that had prevailed in every corps of men saving their spirit ration and disposing of it at a higher rate to those who had money. But on the other hand, it was found that some few men laid by the money they received in lieu of spirits, and when it had accumulated to a considerable sum, spent it in a regular bout of drinking.<sup>(s)</sup> Thus the measure was attended by some evils which are worthy of notice in remarks such as these.

Among the regulations under which canteens were originally established was one which, however, seems only to have been observed in a few regiments, that they should be open only from six to eight o'clock p.m. daily. Every attention was to be paid to the men who resorted to them, rum, brandy, and wines being obtainable in moderate quantities, also bread, biscuit, cheese, cigars, &c. &c.; and with reference to the 13th Foot, then at Cawnpore, the circumstance was recorded that in 1834 the canteen, as conducted, "added much to the comfort of the men," they being supplied at it with tea, coffee, and various articles of groceries, all of wholesome quality and at moderate prices. A large room fitted up with tables and forms was set apart in the canteen where the men might sit and enjoy themselves; but no man was permitted to have a sufficient quantity of liquor to render him intoxicated, <sup>(t)</sup> and it is further recorded that from the time when canteens were first established arrangements were made in connection with them for supplying hot tea or coffee to men before morning parade. These facts are important in connection with questions of sanitation, and no less so some others recorded at the time—as, for example, that in some regiments, the soldiers having preferred wine to spirits, supplies of the former of good quality were obtained for their use to the absolute exclusion of the latter. <sup>(u)</sup>

(s) Report for 1828 p. 310, *et seq.*

(t) Report for 1834, p. 60.

(u) Report for 1833.

(r) Report for 1834, p. 65.

But we learn that a similar measure had really been introduced into a portion of the army many years before that time. Thus, our troops employed in Egypt in 1801 had a daily ration of wine given to them, a practice which was continued at some if not all the Mediterranean stations, especially Gibraltar. "In the West Indies, the Mediterranean, and on the Continent of Europe," so Dr. Burke wrote, "the soldier is supplied by the commissariat with one pint of wine daily, and only in great emergencies is he ever served with spirits." "Government," he added, "ought to spare no expense in endeavouring to discourage the use of ardent spirits in the army, and in substituting a more wholesome beverage."

In 1832 (v) an attempt was for the first time made in the 11th Hussars and 26th Regiment, both stationed at Meerut, to introduce beer into the canteens of those corps; but as a supply from England was unattainable, a quantity was obtained from a brewery shortly before established at a hill station not far distant. Towards the end of that year, and in the following, good English beer was issued to the soldiers at Calcutta and Berhampore at a cheap rate, the men of the 49th Foot at Fort William paying about 3½d. per quart for what they used; and so favourable were the results at both places that "not only did the prevalence of drunkenness decrease, but so did the number of serious accidents, of drowning, apoplexy, and delirium tremens." (w)

The profits of canteens soon became considerable, and they were partly dispensed for the general good of the regiment, as for the support of the school and of orphans, for the supply of tablecloths and delf for the use of the men, books for the library, in gratuities to deserving men of long service, in prizes for children, in the purchase of cricket-balls, quoits, &c., and sometimes in sending sickly men short trips on the river. (x) But the

direct effect which the establishment of canteens had upon the rate of mortality and the number of punishments was of so marked a nature that the then Inspector-General specially dwelt upon it in his report. This is indicated in the following table: (y)—

Year.	Deaths to Strength.	Number of Punishments.
1826 ...	9.7 per cent.	... 158
1827 ..	6. "	... 135
1828 ...	6.2 "	... 94
1829 ...	6.6 "	... 136
1830 ...	3.8 "	... 122
1831 ...	4.3 "	... 88
1832 ...	3.9 "	... 93
1833 ...	Not stated.	... 74

Notwithstanding the results here shown, it is undeniable that certain circumstances interfered materially with the full benefit that should have been obtained from canteens. Among them Dr. Burke (z) enumerated the inferior nature of the liquor issued at some, and the too great surveillance exerted over the men frequenting them. Government in a measure directed the sale in them of ordinary rum of the country supplied by the commissariat—a liquor which the soldiers liked on account of its cheapness, but which in the quantities allowed to be issued—namely, two drams daily—speedily induced its pernicious effects; and it was distinctly stated that, in consequence of the imperfect management of some, drunkenness and other vices had actually increased after canteens were first established. For example, that in the garrison of Fort William was in 1836 described by Dr. McLeod as having been the worst conducted establishment he had ever seen; in it any man could have as much liquor as he could pay for. The scenes witnessed there were in consequence "beyond belief," but the officer commanding invalids in the fort had no power to interfere; the establishment was entirely under the orders of the Indian officers, and "the efforts of the Brigade Major Queen's troops to prevent the invalids from resorting to it gave great offence

(v) Report for 1832, p. 48.

(w) Report for 1833, p. 238.

(x) Report for 1833, p. 241.

(y) Report for 1833, p. 236.

(z) Report for 1831, pp. 465—467.

to the authorities of the fort" at the same time that they failed in their object. It moreover so happened that this establishment, situated at the seat of government, was that to which the higher officers had readiest access, so that its failures were erroneously considered as indicating a general want of success in the scheme, whereas at the more distant stations, as already mentioned, canteens, when properly managed, had been productive of much benefit. Dr. McLeod endeavoured to represent matters as they really were, and accordingly thus expressed himself:—"That it would be very desirable that no canteens were required as an appendage to a barrack, I readily grant; but I have known barracks before canteens became a part of their regular establishment, and I have known them since, and I have no hesitation in asserting that the canteen is a benefit, and that a well-regulated one is an improvement on the old system, although falling short of what it ought to be."

Among the measures adopted with a view to check the prevailing drunkenness to which allusion has been made was the formation in some regiments of temperance societies. The first mention of such institutions occurs in the reports for 1828, by which it appears that reading-rooms, provided with books, newspapers, and coffee, were available in connection with them, the expenses being defrayed by a small monthly subscription from members. Five years afterwards—namely, in 1833—Dr. Burke alludes to them as being an attempt among the soldiers "to deliver themselves from their malignant enemy the use of spirits," and he specially refers to the success with which a society of this nature was conducted in the 26th Cameronians. (a) Its establishment only dated from 1832; yet within a year from that time, 200 men of the corps had become members, and they were the healthiest in the regiment; the amount sent home by the men to their friends had increased from £1,183 to £1,416,

and in the two years succeeding, no corporal punishment was inflicted in the regiment. (b) In this particular instance very much of the influence for good exerted by the society was due to Dr. Bell, at the time Surgeon of the Cameronians. Adverting to it, Dr. Burke observed that "it would be a tedious and difficult matter to explain in what his system of discipline consists, as it appears to depend upon a certain moral influence of the individual over the minds of the men rather than on any peculiarity of orders for their management. It is too much the fashion," he further observed, "to consider soldiers as mere machines, and devoid of those qualities that enable them to conduct themselves like reasonable beings, and to treat them accordingly. To all such opinions the above is an answer."

Among other regiments in which about the same time temperance societies were established, special mention was made of the 11th Light Dragoons, the Buffs, the 16th and 31st Regiments. Various degrees of success seem to have attended them in these corps, but that in the 26th still maintained its pre-eminence; and when, in 1838, statistics were drawn up with a view to indicate the ratio of sickness among the men who belonged and those who did not belong to the societies, the following results were arrived at, namely:—

*Per cent. in Hospital daily.*

Month.	Temperance		Non-temperance	
	men.		men.	
January	...	2.54	...	8.05
February	...	2.27	...	8.27
March	...	2.94	...	8.63
April	...	5.47	...	10.28
May	...	5.24	...	10.66
June	...	4.55	...	10.35

But in the face of such facts as the above and other tables exhibit, a strange indifference was shown by the Indian Government not only to the extension of the societies, but also, as recorded by Dr. McLeod, "to other measures having reference to

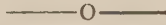
(a) Report for 1833, p. 237.

(b) Report for 1844, p. 73.

the social and physical well-being of the soldier." The natural result followed in due course. Institutions which did not obtain the support of the higher authorities languished, and in 1841 they were in a decaying condition. Three years afterwards they may be said to have ceased to exist, and Dr. Clarke wrote in regard to them, that they received no patronage from commanding officers, at least with very few exceptions; they still existed in some corps, and seemed to tend much to the health and good conduct of their members, but "by recent orders from His Grace the Duke of Wellington, commander-in-chief, they are forbidden" (c). So

(c) Report for 1844.

ended for a time some of the measures devised with a view to suppress or moderate the prevailing vice of drunkenness in India. It is almost unnecessary to observe that of late years temperance societies in connection with institutes have been reintroduced into the portion of the army serving there; and that they receive from Government the support which their importance merits. By these and other measures recently adopted, vice and intemperance among the soldiers in that country have been reduced to a standard little, if at all, beyond what prevails in the United Kingdom. Public opinion has enforced the measures of repression which years ago medical officers proposed.



## THE ACTION OF ALCOHOL ON THE HUMAN CONSTITUTION IN HEALTH AND DISEASE.

BEING THE SUBSTANCE OF A PAPER READ BY DR. MATHESON, AT A MEETING OF THE NORTHUMBERLAND AND DURHAM HOMŒOPATHIC SOCIETY.

(Reprinted from the *Newcastle Daily Journal*, of Aug. 9, 1869.)

THE subject announced in the title of this paper is confessedly one of equal importance and difficulty. The importance of the subject is sufficiently apparent from the vast amount of money daily expended in the manufacture and consumption of alcohol in its various forms, as well as from the appalling amount of crime and misery of every sort, of which it is the notorious and prolific source. On the other hand, there is no subject, as you all know, in regard to which there has prevailed among medical men a greater variety of opinion. There are some who prescribe it indiscriminately on almost all occasions, and for almost all classes of disease, while there are others who, rushing to the opposite extreme, maintain its utter inefficacy, and even its injurious influence, in all circumstances, whether of health or sickness. It is commonly said in such cases that the truth lies midway between extremes, and this is probably

so far the case in the present instance also. For my own part, however, I am inclined to think that it lies at least somewhat farther in the direction of the latter than in that of the former view; for I have come to the very decided conclusion, after much reflection and careful observation, that while in health it is utterly unnecessary and positively injurious in every form, there are very few cases indeed of sickness in which it may not be dispensed with, not only with safety, but with positive advantage to the patient. Indeed I am of opinion that the indiscriminate use of alcohol at present sanctioned by the great majority in the profession is without any warrant in science, and, considering the physical and moral effects attending its use, altogether unjustifiable.

In speaking for a moment on the scientific aspect of the question, I may be permitted to refer to the very destructive effects well known to be pro-

duced by alcohol on the blood and tissues of the body. On this point numerous experiments, with the details of which I need not trouble you, have been repeatedly made by competent investigators. The results of these experiments, as accepted both by those who advocate and by those who oppose the dietetic use of alcohol, are pretty much these—that when the liquor sanguinis, becomes surcharged with alcohol, the blood corpuscles not only become affected, but also the liquor sanguinis itself suffers deterioration; that alcohol stimulates the blood discs to an increased and unnatural contraction, which hurries their development, and induces their premature decay and death; and that, as a consequence of this, the colouring matter disappears from them, and they lose their vitality, on which account less oxygen can be absorbed, and less carbon carried out of the system. This devitalised condition of the nutritive fluid is believed to be the first step to the devitalisation of the tissues which it feeds. Alcohol is known to coagulate albumen wherever it meets it. Commenting on these facts, our much esteemed friend, Dr. Hayle, says, in an able paper on “Alcohol: its Action and Use” (with all the conclusions of which, however, I am far from agreeing), contributed to the *Monthly Homœopathic Review*, “Whether it (alcohol) produces these effects on the animal fluids merely by its attraction for water, or by that and its direct action as an irritant, is unimportant to the argument. It is obviously a chemical agent of very great power; admitted by its power of mixing freely with the blood into the very *penetralia* of the system, and thus capable of perverting or even of destroying the vital forces throughout the whole system.” When we consider that alcohol is thus admitted to be so potent an agent for evil, not only by those who out-and-out oppose its use, but by those who (as Dr. Hayle does) recommend it in all “debilitating diseases where there is little appetite and much waste,” and indeed, in all “the slighter cases of fatigue occurring in the everyday wear and tear of ordinary life, no one

can doubt that to the conscientious medical man correct views on the manner, time, and circumstances of its administration are of the very utmost importance.

The class of cases in which it is customary to prescribe alcohol, in some form or other, are, of course, chiefly those of which weakness is a prominent feature, it being commonly supposed that for such a morbid condition, from whatever cause arising, alcohol is the universal remedy. How mistaken this notion is, however, has been very clearly shown in an article in the *Monthly Homœopathic Review* for September, 1867, in which it is clearly proved that, as weakness is never a disease *per se*, but invariably the result either of some constitutional or local morbid action in the system, it can never be cured, but is very frequently increased, by the supposed remedy, and that the only proper scientific, and indeed the only possible, mode of curing such weakness must be the removing of its cause. It must certainly be admitted that the use of alcohol often imparts a feeling of support and comfort to patients suffering from over-fatigue and weakness. But the relief thus obtained is dearly bought. The original cause of the weakness remains untouched. It is frequently seriously aggravated by the alcohol, and it too frequently happens that an appetite for the stimulant is engendered, which it may require almost superhuman efforts on the part of its unhappy subject to enable him to overcome. We all know that, as a matter of fact, in a large proportion of cases the requisite effort is not put forth, the result being a continuous accession of victims to what we must all feel to be one of the most deplorable vices of the day.

Speaking of drunkenness, I am myself disposed to regard it quite as much in the light of a disease as in that of a sin. In many cases the daily imbibition of even a moderate quantity of alcoholic stimulants begets a physical appetite for more in its unhappy victim, which, when once established, works in his constitution like any other disease, and altogether

independently of his own will. He may refuse to gratify this appetite, but over the cravings to which it gives rise he has no direct control. From my own observation I should be inclined to say that medical men, as a rule, too frequently ignore this view of the case; and I cannot but think that if it were more constantly present to their minds they would pause much more frequently than they now do before prescribing so dangerous a remedy. That alcohol should be productive of such mischievous effects need not at all surprise us, for the facts already referred to in the beginning of this paper show that, by its means, the blood is in effect poisoned, so that the brain ceases any longer to receive a proper supply of healthy fluid, and thus becomes incapable of the proper performance of its functions. But, besides the evil effects produced on the brain in this way, the direct action of alcohol upon that organ is no less prejudicial, in consequence of the special affinity which it has for it, leading to its accumulation there. That the mind, therefore, which can be preserved in a healthy state only so long as the brain is in a similar condition, should become powerfully affected, as well as the body, through the influence of alcohol (and the power over the will lost) is a result which *a priori* we should be prepared to expect.

It is frequently objected by those favourable to the use of alcohol that the mischievous results now referred to follow simply from its abuse; that small doses do *not* produce them, and that the legitimate remedy for any risk accompanying its use is not a systematic avoidance of it, but just the exercise of proper self-control. To this it may be answered, that though those results certainly arise ordinarily only from excess, the essential tendency of the agent in question, even when given in small quantities, is to produce them in all; while we know, as a matter of personal observation, that on account of constitutional idiosyncrasies, even such small quantities are quite sufficient to produce in certain individuals

the very worst of the effects that have been specified. I believe the experience of every medical man will furnish instances in which the recommendation of so simple a matter as a glass of beer to dinner, to "strengthen" the patient, has ended in the production of such a physical craving as has been referred to, and has eventuated in the total wreck, both physical and moral, of the unhappy individual. At least, gentlemen, if there are any of you whose practice does not furnish such instances, I am sorry to say that I cannot make the same boast, for in several cases in which I have recommended, in the most harmless manner as I at the time imagined, a glass of beer or porter, these sad results have followed. Moreover, it humbly appears to me that it is vain to ask a man to exercise self-control at the same time that you are administering to him an agent of whose very nature it is, through its physiological and psychological effects on his system, to deprive him of the power of exercising that virtue. These considerations seem to me a sufficient answer to the argument that the moderate or judicious use of alcohol is harmless, an argument which, as I have already intimated, appears to me to be far too thoughtlessly and flippantly made use of.

With regard to the supposed sustaining or supporting influence of alcohol on the system in disease, I do not by any means believe in this—not, at least, to the extent to which it is ordinarily acted on. When we reflect on the deterioration of the blood, brain, and tissues, of which, on all sides, it is the admitted cause, it seems quite impossible to suppose that it can in any way nourish the system, or act as food, as some medical men maintain. But, in addition to this *a priori* argument, it is a fact which admits of no dispute that, after alcohol has been swallowed, it can be found pure and unchanged in the brain and tissues of the body, and that its derivatives have never been found—the natural inference being that the body endeavours to get quit of it as rapidly as possible, like any

other poison. This view of the matter has the support of some of the most eminent men in the profession. Thus Dr. T. K. Chambers says, in his far-famed clinical lectures on "The Renewal of Life":—"It is clear that we must cease to regard alcohol as in anywise an aliment, inasmuch as it goes out as it went in, and does not, so far as we know, leave any of its substance behind it." Dr. Markham also, the eminent editor of the "British Medical Journal," says:—"Alcohol is not a supporter of combustion; it does not prevent the wear and the tear of the tissues; part, and probably the whole of it, escapes from the body; and none of it, so far as we know, is assimilated or serves for the purposes of nutrition. It is, therefore not a food in the eye of science." Further testimony to the same effect might be adduced to almost any extent, from the most eminent medical writers, and those by no means advocates of what is called total abstinence.

The view thus shown to be correct theoretically is also found to be the only view which is safe and consistent with the welfare of our patients in practice. It is now placed beyond all doubt that in proportion as the different preparations of alcohol are banished from hospitals, the mortality diminishes, and *vice versa*; and there can be no doubt that, had we statistics on the matter, the same would be found to be the case in the sick room. Even in regard to private practice, however, it is worthy of notice that those practitioners who have been at the pains to try both methods have invariably arrived at the conclusion that their patients made more frequent and satisfactory recoveries when almost no stimulant had been administered; whereas the practitioners who still persist in prescribing stimulants in disease are simply those who have only tried practically one side of the question.

So much, then, in regard to the use of alcohol in disease generally. There is, however, one class of cases that may demand a more special notice. I mean those who, without being, strictly speaking, patients, are

constitutionally weak, or have been overwrought in mind or body, or both, and who, it is supposed, are likely to obtain benefit from the use of stimulants. Of course, if the arguments already advanced against the use of stimulants in general, are valid, they furnish the clearest reasons why, in this class of cases, the practice is specially injurious, and they virtually involve its condemnation. In addition to this, however, I may be permitted further to remark that, in the case of the class now under consideration, according to my experience, the use of alcohol, even in moderate doses, does not, as a rule, accomplish the object in view. In other words, it does not ordinarily really sustain or strengthen the system. It certainly produces, as has been already admitted, temporary comfort and stimulation; but this condition is usually followed by depression, which requires a further recourse to the accustomed stimulus; digestion is impaired; unhealthy blood is formed; and an artificial state of the constitution generally is induced, which renders the individual, in the literal sense, an easy prey to the "ills which flesh is heir to." Such a state of the constitution, moreover, is highly favourable to the full development of any disease to which the individual may happen to be hereditarily or constitutionally predisposed. In support of these views I may be permitted to quote the opinion of so eminent an authority as Professor Christison, who, in his "Dispensary," says:—"It (wine) is an unnecessary article of diet, for all who are healthy, robust, and engaged in an active occupation. But the artificial state of the constitution produced by the habits of civilised life are supposed to render it for some people a necessary stimulant, especially during exposure to unusual fatigues. . . . Very few constitutions of this kind really exist among those who are willing to think they themselves possess it. And there are extremely few persons, not hardened by the habitual use of wine, but will find that they sustain bodily fatigue and mental exertion as well

at the time, maintain it as long, and suffer as little subsequently under the practice of abstemiousness."

Up to this time I have been speaking almost exclusively in the direction of condemning the use of alcohol in disease, as that is ordinarily practised. I should not wish, however, to be understood as maintaining that, in no conceivable circumstances whatever benefit can be derived from it, though I do most strongly believe that the cases in which this remedy may be legitimately used are very few indeed in comparison with those in which we find it at present ordinarily administered. I may, therefore, appropriately draw these hurriedly-written remarks to a close by briefly pointing out the classes of cases in which I have found alcohol to be beneficial, and the indications in those cases for its use.

I know of no agent so valuable as an occasional remedy in chronic heart disease, where there is great failure in the action of the heart, threatening total suspension of its movements. In such extreme cases, its stimulating effect on the central organ of the circulation is of great benefit. To be of real service, however, its use should never be long continued.

I have also found it beneficial in a very few cases of fever, and these chiefly occurring among the debilitated and the aged. I would only prescribe it in such cases, however, when I found the vital powers flagging, the pulse intermittent, and the tongue comparatively clean, with no congestion of the nervous centres. This definition, you will observe, limits its use to a very small number of cases, and mainly to the time when the patient is undergoing what is called the crisis of the disease. Experience has satisfied me that, in fever, the administration of alcoholic stimulants on any other conditions invariably tends, by its overpowering effect on the nervous centres, to hurry the attack to a fatal termination.

In convalescence from acute diseases, I believe the occasional use of stimulants may promote recovery in

the case of some of those few persons who have a naturally feeble constitution, and who are at the time free from any active disease. Here again, however, discrimination is necessary, for even in such cases they are utterly unsuitable except when the tongue is clean, the digestive organs free from positive derangement, though feeble in tone, and when there is no tendency to any local congestions. In all other cases, and they form by far the greater majority, their use will only retard instead of promoting the recovery.

Stimulants are also often prescribed for the exhaustion which follows excessive brain work. Of this use of them, however, I cannot approve. I consider their administration in such circumstances, for reasons already stated, highly unphilosophical and altogether out of place. The proper remedy in such cases is rest.

In cases of sudden faintness, and in a few cases of great prostration from any cause, small doses of alcohol may sometimes be of use, given for a brief period; but, to avoid the dangers already indicated, this should be done with extreme care, and only when no substitute can be found. Moreover, in all such cases, it should be prescribed on the same principle as any other medicine, and not by any means left to the discretion of the patient.

These instances, gentlemen, comprise all the cases in which my own experience would justify me in prescribing alcohol in any form; and were its administration restricted to such cases only, the smallest reflection will serve to show that the change would involve a very different state of matters from what we now daily see and hear. That such a change would be a boon to humanity, on physical, moral, and social grounds, I cannot for a moment doubt; and those being my convictions, I have taken the liberty of inviting your attention to this very important subject. My object will be gained if this brief and imperfect paper have the effect of initiating a frank interchange of sentiment on the subject on the present occasion.

## CONFERENCE ON INTEMPERANCE AT BIRMINGHAM.

ON Monday afternoon, September 20, a select conference on intemperance, convened by Messrs. Edward Gem, Charles Sturge, and J. S. Wright, was held at the Committee Room of the Town Hall, Birmingham. Dr. T. Bell Fletcher occupied the chair, and there was a good attendance of ladies and gentlemen.

In opening the proceedings, the chairman, speaking for his professional brethren—although he had not consulted a single one of them upon the subject before the meeting, had no hesitation in saying that the medical men were all advocates, strenuous advocates, of temperance in alcoholic drinks. From their point of view, temperance was very much to be desired. (Hear, hear.) Temperance might lead to total abstinence—that might be necessary and advantageous to some people; but, in his opinion, total abstinence was an affair between a man and his Maker. If it were needful to salvation to cut off a right hand, to pluck out a right eye, it might also be necessary for a man who felt himself to be in danger even in being temperate, to become a total abstainer. There was no doubt that most temperate drinkers drank a deal more than was necessary or good for them, and ninety-nine out of 100 would not suffer at all if they left off alcohol altogether. As he said before, the question of total abstinence was one between a man and his Maker; no human institution ought to guide them to a conclusion, for he feared that when persons connected themselves with societies, they were apt to alloy with their zeal and energy a feeling of pride, or some other feeling, which must interfere with the great benefits which were expected to be obtained. (Hear, hear.)

Mr. C. STURGE opened the discussion in a few words. It was now fifty-three years since he became a total abstainer, and he found himself as hearty as most men of his age. From experience he strongly recom-

mended all his friends and all the nation to try teetotalism. (Applause.)

Mr. T. C. S. KYNERSLEY, coroner, took the opportunity of saying that no one suffered more than himself from the general intemperance of the town. If they could persuade people to be as temperate as they wished them to be, his labours would be very much reduced—in fact, almost to a sinecure.

Mr. FURNEAUX JORDAN ventured to express, on behalf of the surgeons, the opinion that the use of stimulants in the treatment of medical cases might be greatly diminished if not done away altogether. So far as his experience went, the cases in which it was necessary to prescribe alcoholic stimulants were quite exceptional. (Hear, hear.) In private practice he had constantly to say to patients that by totally abstaining they would not only be better in sickness, but they would be better in health, and would live to a greater length of time. (Hear, hear.) Cases would now and then arise in which it would be necessary to resort somewhat freely, perhaps, to the use of alcoholic stimulants; but such cases were altogether exceptional. A great authority upon the treatment of a very painful and common disease—Mr. Paget—said that that disease could be much better treated without stimulants than with them. (Hear, hear.) Notwithstanding what had been said, however, by their great medical teachers, the text-books of the profession still advised the use of alcoholic stimulants; but he told them of a case in his experience at the Queen's Hospital wherein much greater progress was made by abstinence from stimulants than in another case in which alcohol was used. The speaker, too, mentioned an instance in which the practice of taking a glass of port wine the first thing in the morning, adopted upon the advice of a surgeon, had gradually developed delirium tremens. As the remedy for intemperance, philanthropic, and benevolent individuals prescribed educa-

tion. Well, he for one, was in favour of universal, compulsory and, if they liked, taxed education; but, beyond that, they required that greater difficulties should be placed in the way of obtaining alcoholic liquors. (Hear, hear.) If they suppressed half of the present number of public-houses, and limited the hours of business of the others to something like those of other trades, they would then confer an advantage upon the community. (Applause.) He would by no means under-estimate the value of education; but they did not trust to it alone in other evils. If a man failed to place proper guards over his property—if he left his door open at night, and thieves went in and stole, they did not say in such a case that they would trust to education for the remedy—educate people and then they won't be thieves. Let them educate the people, but at the same time let them do with alcohol as the man did with his goods—let them so guard it that people could not get at it as they liked. (Applause.)

Dr. ROBINSON, late medical officer of the Workhouse, said the medical profession were not educated upon the alcoholic question. During seven years' study in this town his attention was not once directed to this matter. As the result of seven years' experience afterwards as a medical officer of the Workhouse, he declared that nine-tenths of the patients who came under his notice in that capacity owed their illness to drink and tobacco. He said medical men were often obliged to consult not their own judgment, but the wishes of their patients with regard to alcohol. He did not think it possible for a medical man to obtain a practice in Birmingham unless he allowed alcohol. But the great evil was that thousands of medical men were uneducated on the question. He blamed parents for setting a bad example to their children by smoking cigars and drinking spirits.

Mr. BARTLEET remarked that, nine years ago, he was treated by a very eminent medical man for bronchitis. This gentleman recommended him, when he had recovered, to drink bitter

beer and sherry; but when he (Mr. Bartleet) declared that he would not, this medical gentleman—although he had just recommended him to have it—said, "Well, if you can do without it, it will be better for your chest."

Dr. HINDS said the profession was not open to the charge of "exhibiting" stimulants in a reckless manner. Very few of them did so. Nor did he believe, with Dr. Robinson, that they were in the habit of consulting the wishes of patients rather than their own judgment. He spurned and resented the charge that they prescribed not what they thought good, but what they were compelled to prescribe. No medical man worth his salt would do such a thing. The whole medical profession would support a measure for the suppression of intemperance; but to assert that alcoholic stimulants were not valuable in medicine was contrary to their convictions, though he believed alcohol was extremely injurious to children. It was not generally necessary for ordinary use, but he knew a few people who could not enjoy their lives without it.

Dr. NORRIS, Professor of Physiology at the Queen's College, Birmingham, held that alcohol was in some cases a medicine of very distinct value and importance, but that it never was, under any circumstances, necessary to any person in a state of health, and living in healthful conditions; but alcohol helped persons who had to make continuous, unhealthy, unphysiological exertions, and persons who had to work at night, and who were tried and embarrassed by care and trouble. Whether it helped them in the long run he did not know; but in the race of life people could not always stop to consider whether their lives were to be shortened. There was often work to be done which must be got through at whatever cost, and in such cases alcohol was of use. It was, however, never necessary as a beverage; but while he held that it was useful as a medicine, there was difference of opinion upon that question, and it could only be decided by patient watching and trial.

Mr. GREEN, Medical Superintendent

of the Lunatic Asylum, said he was convinced that fully nine-tenths of the pauperism, and a great deal of lunacy, were owing to intemperance, and he lamented that the Legislature was encouraging the establishment of gin-shops. He could see no necessity for gin-shops, beer-shops, and public-houses. If people wanted drink, they should buy it as they did bread and meat, and take it home for use.

Mr. THOMAS DOWNING said he had heard it stated that there were twenty-two diseases produced by alcohol, and not one cured by it. He wished to have the opinion of the medical gentlemen present on that statement.

The Rev. CHARLES BRITTAIN, chaplain of the Workhouse and Lunatic Asylum, said teetotalism was the grand remedy for drunkenness. He, like Mr. Green, lamented that the Legislature encouraged gin-shops.

Dr. EDMUNDS (London) said it was lamentable that £100,000,000 were spent in this country upon intoxicating drinks, while millions of the people were in need of the bread that might be made of the grain destroyed in the manufacture of those drinks. He did not understand how men could persist in urging that moderate drinking was harmless, seeing that it was an incontestable fact that moderate drinkers were constantly becoming drunkards. The men who were justly proud of being able to confine themselves within the bounds of moderation, knew that their neighbours were not always so happy, and that even distinguished clergymen, distinguished lawyers, and distinguished physicians, fell victims to the fascination. The onus of setting a good example lay with the clergy and the medical profession; and a great responsibility rested between these two professions in connection with this subject. He feared they were both greatly influenced rather by the opinions of those by whom they were surrounded, than by their own judgment. He mentioned this, not by way of reproach, but to ask them to look well to the foundations of whatever views they held. Every man—lay and clerical—was, with certain qualifications, a reflex of

public opinion; and when men who "spurned and resented" the position that they were guided in a great measure by the opinions of those by whom they were surrounded, should remember that the clergy in the Southern States preached that slavery was enjoined by the Bible, and should reflect that medical men were compelled to yield something to the prejudices of those by whose suffrages they lived, and if they did not do so, they would throw themselves out of joint with society, and would have no influence whatever. If one refused to let a patient have a glass of wine, the patient would simply go to another physician. He declared from his own personal experience that more work could be done without than with alcoholic stimulants, and that typhus fever and other diseases that were generally selected as instances in which alcohol was necessary, were better treated without it, and without opium, which was the usual substitute. With regard to work, he had made careful experiments upon himself, working for some months alternately with and without alcohol, and he came to the conclusion that he could do better without it.

Dr. BRACEY said alcohol was quite unnecessary to any person in health. He believed men would live longer, enjoy life more, and do more work, without it than with it.

Dr. BAILEY, of Stourbridge, did almost entirely without alcohol in his practice. His patients were better without it. He did not believe in the alleged impossibility of a teetotal doctor establishing a practice. He had succeeded at Stourbridge, a very bad place for a teetotaler. But he believed he might have done better if he had not been a teetotaler. He wished to hear an answer to the question—What disease did alcohol cure? He was sure that by itself it never cured any; but it had produced many diseases, and destroyed millions of human beings.

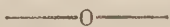
Mr. WYLES (Coventry) invited some medical gentleman to move the following resolution:—"That this conference is of opinion that much error

prevails in our medical schools on the therapeutic value of alcoholic liquors; that this error is propagated in medical text-books, and acts most injuriously upon the common medical practice of this country; that this conference highly commends the teaching and practice of the many eminent physicians who are employing their great medical eminence to diffuse sounder views upon this subject, which is of such vital importance to mankind."

The CHAIRMAN said he would move that resolution. There was nothing in it that any medical man could not adopt. At the same time he would not bind himself to abstain from

stimulants or anything else that would cure his patients. In his practice he had seen great advantage from stimulants, but he was perfectly sure that they ought to remain in the hands of medical men. The most valuable remedies in medicine were poisons, and alcohol was one of them. In answer to the gentleman who asked whether it was true that alcohol produced twenty-two diseases, he would say that that number might be doubled, and even quadrupled. Most diseases went in at the mouth.

Dr. NORRIS seconded the resolution, and it was carried unanimously.—*Birmingham Daily Post.*



## INTEMPERANCE—ITS CAUSES AND REMEDIES.

THE first meeting of the session of the Metropolitan Association of the Medical Officers of Health, was held on Saturday, 16th October, in the large room of the Scottish Hospital, Crane Court, Fleet Street.

After the despatch of the preliminary business, the President, Dr. Druitt, read a paper he had prepared, entitled, "A Practical View of Intemperance, with the Causes and Remedies." After speaking of the enormity of the evil of intemperance, the President observed that all remedies which had been tried to stem it did not go sufficiently near the root of the mischief. It was confessed on all hands that neither the terrors of the law, the admonitions of friends, the promises of the Gospel, nor anything that could be named, was sufficient to check intemperate persons. Clergymen had confessed to him that in dealing with this vice they were completely baffled, and that religion could have no scope until drunkenness ceased. Yet some of the inveterate secret drinkers he had known were exceedingly devout in their way, and he had also known instances of intemperance, amongst women especially, who were distinguished in the walks of philanthropy for their great benevolence. Passing from this part of the subject, he

referred to the statements frequently made relative to the testimonies of coroners, magistrates, managers of lunatic asylums, gaols, &c., to the effect that drunkenness was the cause of most of the crime and insanity that came under their notice in discharge of their duties; but he would object to such statements, because they did no good, and they were not true, for they put the case in the inverse order. Instead of saying that a man was rendered criminal by drinking, the truer statement would be that the man had begun by committing crime and took to drink afterwards. Drink was treated by the persons he had named as the prime mover, whereas it was more often secondary. Speaking with respect to teetotalers, he said that they did not as a body deserve the contemptuous treatment that the language of some few teetotalers entitled them to. All persons were worthy of respect and encouragement who were trying to put down drunkenness. Still his opinion of the man who signed the pledge was that he was in the position of a muzzled dog; as soon as the muzzle was removed, his passion would break out. What was wanted, was that a man should enjoy perfect freedom, and that he could not have

if either he were a slave to drink, or fettered by a pledge which prohibited him from a moderate use of alcoholic drinks. A report of Convocation had recently been issued, which quoted an opinion that the only remedy for intemperance was the entire extinction of the production and sale of intoxicating drinks as beverages. When one read such a statement as this, one could not but think that there was some insanity even among persons who did not drink. When we considered that alcohol might be produced from almost every vegetable substance that served for food, and could be made for 1s. 6d. per gallon, it seemed utterly hopeless to think to put down intemperance upon that system. If, then, religion and rhetoric failed, he submitted that it would be better to collect facts with regard to the beginnings of the vice as we should with reference to any other disease, so that we might know the roots of the evil and attack them. He had practised for nearly thirty years as a medical man, and had had opportunities of observing the conditions under which persons of education had become victims to intemperance, and therefore it was no new subject to him. Indeed he had brought before the Obstetrical Society a proposition for the substitution of beef-essence for brandy, especially for women after confinements, and the use of the former had very greatly increased; and he had also written upon the subject of light wines, recommending the medical faculty to resort to those safe beverages. Those efforts had not been made in vain. Premising that everything done in the body was done by something introduced into it, Dr. Druitt proceeded to remark that the food of all persons contained stimulants of some kind. Food was the source of heat and muscular movement, and was the fuel to enable the human frame to work, and to carry on thought, and to provide that cheerful flow of spirits which was necessary for the tolerance and enjoyment of life. The most common way of removing disagreeable thoughts, and of creating pleasant ones, was by

reverting to one or other kind of stimulating food, and alcohol was the most universal, and the most capable under given conditions and in a given time, to produce a semblance of those effects, that ought better to be sought from healthy food, work, or rational amusement. Therefore it was that its use so often led to its abuse. The abuse began in some cases by making it a palliative for every ill affecting body and mind. By another class it was made the substitute for recreation, and took the place of books, music, &c. Thus we got a division of the intemperate into two sets; into such as were led into the habit of using alcohol as a palliative for bodily or mental ailments, and the other who sought it as a means of pleasurable excitement. The former class were secret drinkers, the majority of them being women, who were deserving of the sincerest sympathy. These might be saved by judicious medical aid. The other class were the victims of bad education, bad social habits, and bad training of the nervous system. These were for the most part open, riotous, and gregarious drinkers, and usually men in whose case prevention must consist in improving the general intelligence and social habits of the people. With both classes the aid of medical men would greatly tend towards a cure. The physical effects of the abuse of alcohol were the same in both cases. The classification must not, he said, be considered as absolutely correct, for he could not say that only secret drinkers were led to it by illness, nor yet that any drinker, no matter how he began, might not indulge in secret. It was a general statement, and would hold good in the majority of cases. When legislation for dipsomaniacs was talked of, it would be essential to bear in mind the difference between the two classes. Speaking generally, he might describe private drinkers as invalids who should be left to the care of judicious medical men; whilst, on the other hand, the open riotous drinkers were criminals, and should be dealt with by the police and by the "State physician." Dr. Druitt then

proceeded to an enumeration of the bodily ailments which lead to intemperance, instancing especially those of every variety of debility and depression, and then inquired into the relation between drinking and insanity. Most persons said that drinking was a cause of insanity, just as they said it was the cause of crime, &c., whereas he ventured to say that drinking was as much to be regarded as a consequence of a disturbed brain which drove a person to excess, rather than the opposite. Delirium tremens was not insanity properly so called. The connection between drunkenness and insanity had been defined by Dr. Conolly,\* who said, "The observation has often been repeated that insanity is caused by drunkenness. It seems scarcely just to ascribe the ailment of madness merely to intemperance. Intemperance itself is a malady incidental to unhappy combinations of social circumstances, and to be remedied by reforms of social life." Such opinions were of far more value than those expressed by well-meaning, but, on this point, ignorant, people. Intemperance was often an almost involuntary sin, and his views on that point were strengthened by the knowledge of cases in which its outbreaks were periodical; so that they could be calculated upon almost to a day. The misfortune of private drinking was very common, and represented in a marked degree the weakness of medicine in relieving suffering. All kinds of illness might lead to intemperance, and therefore the object of the practitioner in treating a case of secret intemperance should be to ascertain and remedy all substantial ailings, and then hunt out the morbid sensations and obviate them by the application of suitable remedies. It would be hard indeed if medicines, coupled with kind moral treatment, could not overcome drunkenness. As regarded the statements often made against medical men relative to their prescribing alcohol in excess, they were

often absolutely false—invented by the patient; but life and health might in some cases be restored by brandy. The causes which led to open and riotous drinking were ignorance—ignorance of the true properties of alcoholic liquors, mistaken notions that these drinks were necessities of life, and that they were strengthening in whatever quantity taken, and ignorance of the purer enjoyments of life. That drunkenness did give pleasure to many persons was undeniable. A defective education leading to intemperance was not merely the vice of the lower orders, but of those somewhat above them. For one instance of misconduct in this way amongst the upper classes he could produce fifty amongst the working classes. Next to ignorance, the want of proper amusement was the desideratum of those who, having time on their hands, failing other means, took to the bottle to spend it. Time for amusement was worse than useless if the amusement in which to spend it was not provided. After a reference to the present improved condition of Scotland in the matter of intemperance as compared with a few years ago, Dr. Druitt observed that it was the undeniable right of the ratepayers to exercise a vetoing power over the existence of public-houses, and holding that opinion, he approved of the Permissive Bill, and particularly of the closing of public-houses on Sundays. Still the remedy to be sought was not in the repression, but the substitution, for sensual amusements, of those of a more rational character. A good remedy might also be found in creating a taste for coffee, with a view to supersede alcoholic drinks. This plan had succeeded admirably in France about 1740. The President concluded his paper by submitting to the earnest attention of those before him the following propositions:—1. That all forms of secret drinking require the most careful and humane medical treatment. 2. That public or open and riotous drinking can only be put down by an improved state of public opinion, education, and circumstances. 3. That increased

\* Conolly on the Physiognomy of the Insane. *Medical Times and Gazette*, Dec. 25, 1858.

restriction should be placed upon the sale of spirits and fermented drinks, especially on Sundays. 4. That all persons who drink habitually to excess be encouraged to become teetotalers. 5. That the teetotal system operates beneficially, not merely by the pledge, which is often broken, but by the system of lectures and other means of moral and theological excitement which are associated with it. 6. That an expenditure to provide for the working classes at less than cost price wholesome coffee and rational amusement would doubtless lessen the expenditure on gaols, &c. 7. That open drunkards should be punished as

criminals, and houses that permit drunkenness should be deprived of their licenses. 8. That habitual drunkards should be confined, at the instance of the persons on whom the cost of their maintenance falls. 9. That lesser degrees of insanity, such as eccentricity, extravagance, gambling, betting, &c., should be placed in the same category as drunkenness, subject to the same laws. 10. That the common education of all classes is defective in moral teaching, and should be improved, and the virtue of abstinence should be inculcated.

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## PROPOSED LEGISLATION FOR THE PROTECTION OF HABITUAL DRUNKARDS.

(From the *Medical Times and Gazette*.)

APPENDED hereto is a draft of a short Act, after the model of the Act forming one of the revised statutes of the State of New York. As by the 28th and 29th Vict. c. 99, entitled "An Act to confer on the County Courts a limited jurisdiction in equity," the County Courts already "have and exercise all the power and authority of the High Court of Chancery in (*inter alia*) all proceedings relating to the maintenance or advancement of infants, in which the property of the infant shall not exceed in amount or value the sum of £500" (section 1), the bestowal of a like jurisdiction upon these courts in all proceedings relating to the care and custody of all idiots, lunatics, persons of unsound mind, and persons who shall be incapable of managing their own affairs in consequence of habitual drunkenness, and of their estates, where their property does not exceed the above amount, is simple and perfectly practicable. Should the specimen of an Act which we have here sketched require any further clauses to facilitate its due operation, they could be easily added in committee. We have completed our task in presenting to

the profession a synopsis of a subject admitting of legislative interference and regulation, and it now remains for the Medical Practitioners generally to say whether they will second our efforts, by seeking, in the ensuing session of Parliament, the introduction of a bill which shall at least bring this crying evil in a tangible, and, we venture to add, a practical form, before the attention and consideration of the British Legislature.

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AN ACT FOR EXTENDING AND APPLYING TO HABITUAL DRUNKARDS THE LAW RELATING TO THE PERSONS AND PROPERTY OF "IDIOTS, LUNATICS, PERSONS OF UNSOUND MIND, OR INCAPABLE OF MANAGING THEIR OWN AFFAIRS."

Whereas it is expedient that the powers, authority, and jurisdiction now exercised by the Lord High Chancellor over the persons and property, as well real as personal, of all "idiots, lunatics, persons of unsound mind, or incapable of managing their own affairs," should be extended over those "incapable of conducting their own affairs in consequence of habitual drunkenness," Be it therefore enacted

by the Queen's most excellent Majesty, by and with the advice and consent of the Lords spiritual and temporal and Commons, in this present Parliament assembled, and by the authority of the same, that from and after the passing of this Act the Lord Chancellor shall have the care and custody of all persons who shall be incapable of conducting their own affairs in consequence of habitual drunkenness, and of their real and personal estates, so that the same shall not be wasted or destroyed, as effectually as, and subject to the like powers and provisions now exercised by him, in the case of "idiots, lunatics, persons of unsound mind, or incapable of managing their own affairs," and shall provide for their safe keeping and maintenance, and for the maintenance of their families and the education of their children, out of their personal estates, and the rents and profits of their real estates respectively.

Section II. And be it further enacted that whenever the overseers of the poor of any parish, city, township, village, or extra-parochial place, shall discover any person resident therein to be an habitual drunkard, having property to the amount of £500, which may be endangered by means of such drunkenness, it shall be the duty of such overseers as aforesaid to make application to the Court of Chancery for the exercise of its powers and jurisdiction.

Section III. And be it further enacted that if such habitual drunkard have property to an amount less than £500 the overseers as aforesaid may make such application to the judge of the County Court of the district in which such habitual drunkard is at the time residing, which said County Court is hereby vested with the same powers in relation to the person and real and personal estate of such habitual drunkard as are by this Act conferred upon the Court of Chancery, and shall in all respects proceed in like manner according to the respective rules of practice of the said courts, subject to an appeal to the High Court of Chancery,

Section IV. And be it further enacted that application for a commission in such latter case shall be made to the judge of the said County Court, who may award the same to one or more persons to inquire into the fact of such alleged habitual drunkenness, and the inquisition taken thereon shall be returned to the next court to be holden in the said district which shall confirm or set aside the same.

Section V. And be it further enacted that if the party proceeded against shall traverse the inquisition on its return, an issue shall be directed by the court, which shall be tried in the same court, and the verdict thereon shall have the same force and effect as if rendered upon an issue awarded by the Lord Chancellor.

Section VI. And be it further enacted that all appeals from any order, judgment, or decree of any such County Court made pursuant to the provisions of this Act, shall be filed and entered within three months after the making of such order, judgment, or decree, and shall be accompanied by a bond, with such sureties as the court shall approve, to the opposite party, in the penalty of conditioned for the payment of such costs as shall be awarded against the appellant in case of the order, judgment, or decree being confirmed.

Section VII. And be it further enacted that the expenses of the overseers of the poor, in conducting or defending any application under this Act, shall be audited and allowed in the same manner as other expenses incurred by such overseers in administering or enforcing the laws relating to the poor.

Section VIII. And be it further enacted that the enactments and provisions contained in an Act passed in the eleventh year of the reign of King George IV., and in the first year of the reign of his late Majesty King William IV., entitled, "An Act for consolidating and amending the Law relating to Property belonging to infants, Females Coverts, Idiots, Lunatics, and Persons of Unsound Mind," be extended and applied to

habitual drunkards in the same way as they are now applied, under the interpretation clause of the said Act, to infants, females, idiots, lunatics, and persons of unsound mind, or incapable of managing their own affairs.

Section IX. And be it further enacted that every committee of the estate or person of any habitual drunkard, appointed under this Act, shall be subject to the same rules and regulations, and be responsible for the discharge of the like duties, as now attach to the committees of the estates and persons of idiots, lunatics, persons of unsound mind, or incapable of managing their own affairs.

Section X. And be it further enacted that in case any person adjudged under this Act to be incapable of managing his own affairs, in consequence of habitual drunkenness, shall be restored and become capable of managing his own affairs, his real and personal estate shall be restored to him, and his person discharged from the care and custody as aforesaid, as effectually and in the same manner as persons at one time of unsound mind or incapable of managing their own affairs have

heretofore been discharged from the like care and custody, and restored to their estates, upon proof afforded of their restoration, recovery, or capability of managing their own affairs.

Section XI. And be it further enacted that any persons desirous of voluntarily submitting themselves and their estate to trustees as committees of their persons and property, subject to the provisions of this Act, shall be permitted to make application for a commission to issue, and the inquisition taken thereon shall have the same force and effect as if obtained by the overseers of the poor as aforesaid.

Section XII. And be it further enacted that nothing in this Act contained shall affect the right of any person who may now apply for a commission to issue on behalf of any alleged idiot, lunatic, person of unsound mind or incapable of managing his own affairs; but that such right shall extend, and hereby is extended, to commissions for inquiring into the fact of alleged habitual drunkenness, in consequence of which habitual drunkards are rendered incapable of conducting or managing their own affairs.



## A CLERGYMAN AND HIS DOCTORS.

THE Rev. John D. Frost, B.D., Vicar of St. Paul's, Winchmore Hill, has favoured us, by request, with the following statement of the steps by which he was led to abandon the use of intoxicating liquors, and of the benefit to health that resulted therefrom:—

“For four or five years I was in a very dismal condition of health. The nervous system was sadly shaken, and the digestive organs in complete disorder. Being much connected with the medical profession, I was from time to time advised as to the means of cure. During the period specified I was under the care successively of two allopathic, and two homœopathic

practitioners. Of these, one was an eminent hospital surgeon, and another had a very extensive practice, in London. Each one of the four told me, quite independently one of the other, that there was no actual disease about me, but great functional disorder; and that I must live generously, keep my mind free from care, take moderate exercise, be as much in the open air as I could, and take four or five glasses of port wine a day. I never had a doubt of this advice being right, the concurrence of various medical opinions precluded all doubt; and I felt at any rate temporary comfort from the port wine. But notwithstanding, I was gradually growing

worse; the internal disturbance increased, the action of the internal organs was most irregular and uncontrollable, my general debility increased, and life became a burden. At length I visited Cheltenham, with a strong belief that I should never be able to resume my clerical duties. My relatives there suggested that I should seek the advice of a medical friend, of whose abilities and skill they had the highest opinion. He was a leading homœopathic physician in Cheltenham. I said it was of no use having further medical advice, there had never been but one opinion of my case, and all the medical men I had consulted had done me no good. However, they provided that he should make a morning call, and enter into conversation with me. This ended in my placing my whole case before him. Without going into details, the result was that he deemed it the most important point in the treatment of my case that I should give up the use of wine and all strong drinks. This roused my strongest opposition, and I remonstrated with him, stating that a glass of wine was the only thing that seemed to afford me any support or comfort. He replied that he was perfectly aware of this, but that nevertheless it was injurious to me. I had a hard struggle to receive this doctrine with anything like patience. I felt that I daily experienced benefit from the wine I took, and this experience was confirmed by the best medical judgment. In truth, I thought very little of this physician's skill; and that I should only be worse if I followed his advice. However, after some days' reflection, I began to argue thus with myself: "After all the benefit that I seem to derive from wine, and the system which I have been following, I feel that I am gradually sinking lower and lower—I feel in fact that I am dying; if so, I can but die, and can it matter much whether I die with wine or without it?" I consented at last to put myself into this physician's hands. He required me to adhere rigidly to his rule of abstinence from wine, &c., which, however, he said was not a

rule which he gave in *every* case—he had patients to whom he recommended a little; he advised me entirely to relinquish my clerical duties for a time, and to go away from home; he prescribed a course of medicine for me, gave me directions for my diet, and, charging me not to relax in the observance of his rules, he desired me to see him again at the expiration of a year, forewarning me that as the declension of my health had been gradual, so I must expect its recovery to be. I strictly observed his rules and found his predictions verified. The recovery was very gradual, but it was sure. At the end of the first year, I saw my physician again. He perceived that I had made decided progress. Feeling in myself also that this was the case, I asked him if he would not now recommend me to take a little wine; I thought it might do me good. He replied that I might be *better able to bear it now*, than I was when he first saw me; but that it certainly *would not do me any good*: and he strongly advised me still to persevere in the course I had adopted. I therefore did so. It was about three years before I could be said to be in good health; but now for full ten years I have been in better health than I was during the whole of my middle life. Whatever *other* motives I have for adhering to total abstinence, (and they are very powerful motives,) I feel that under God I owe to it all my power to enjoy life, all my ability to discharge with comfort the duties of my calling as a minister of Christ, and all my freedom from the tyranny of the drinking customs of society. I am now free from all annoying solicitations to drink (at dinners, social meetings, &c., &c.), whether I wish it or not; and from all the discomforts and disorders so frequently experienced by moderate drinkers.

"It cannot be surprising if two convictions have, as the result of my own experience, taken fast hold of my mind; first, that there may be a strong persuasion of the usefulness of wine and strong drink, and it may be taken under that honest conviction

(as I for a long time took it), while really it is doing injury to the system; and secondly, that medical men do unhesitatingly recommend it in a vast multitude of cases (as in my case), when they are utterly wrong in recommending it, and do much injury by the course they adopt. I have seen continually, in my intercourse with my parishioners and others, instances of the bad effects, moral and physical, of strong drink recommended by medical men to convalescents and others. I am satisfied that it is a most reprehensible system, however it may

gratify the patient, and promote the popularity of the medical practitioner.

"I shall be truly glad, as a philanthropist and as a minister of the gospel, if this plain statement of facts may in any degree tend to abate the intolerable evils resulting from the use of strong drink, and from the prevalence of our absurd and mischievous drinking customs. Strong drink is truly the curse of Great Britain and Ireland. Should we not in good earnest, one and all, try to expel the curse?"



## Notes and Extracts.



THE OYSTERS WERE BAD.—"What is the matter, sir?" said a surgeon to his patient. "Well, I have eaten some oysters, and I suppose they've disagreed with me." "Have you eaten anything else?" "Well, no; why, yes, I did, too—that is, I took for my *tea* a mince pie, four bottles of ale, and two glasses of gin, and I have eaten the oysters since, and I really believe the oysters were not good for me."

DELIRIUM TREMENS.—The *Medical Times and Gazette*, of December 4, had an article on the last report of the Registrar-General, in which it says:—"The steady reduction in the mortality from delirium tremens seems to show that inordinate drinking is a practice which is at any rate not an increasing one. It is a good and auspicious sign of the times." The registered deaths for the last three years mentioned in the return, were—1865, 612; 1866, 487; 1867, 369.

KAHL'S EXTRACT OF MALT.—Extract of malt consists chiefly of a peculiar kind of sugar termed maltose, gum, and certain phosphates. It contains, in fact, all the extractive matters of malt, the saccharine principle

not having been allowed to become transformed into alcohol, of which the extract, when properly prepared, is entirely free. The formula for its preparation was first suggested by Liebig; and the extract is affirmed to possess beneficial properties in some forms of dyspepsia, and especially in certain affections of the lungs.—*Lancet*, December 18.

PAYMENT FOR PREVENTION AS WELL AS FOR CURE.—A correspondent suggests that the plan adopted by some heads of families, of paying the family physician a fixed annual sum for professional services, whether there be sickness in the family, or not, would be an excellent means, if generally adopted, of enabling medical practitioners to aid the temperance movement without incurring the serious pecuniary risk often involved in a declaration of an adherence to teetotalism on the part of a member of the profession. We should be glad to receive the opinions of our medical correspondents concerning this proposal.

ALCOHOLIC STIMULANTS IN FEVER.—"I agree with Dr. Gairdner in believing that a great number of

enteric fever cases, including most of those under twenty or twenty-five years of age, get through as well, or better, without wine, though at more advanced ages it can more rarely be dispensed with. I agree with him, too, in thinking that the copious use of alcoholic stimulants tends to prolong the duration of the fever, probably by lessening elimination, and thus retaining the fever-poison in the system. I think I have seen the same prolongation in typhus under like circumstances.—*John Beddoe, M.D., Physician to the Bristol Royal Infirmary.*

**A MODERATE DRINKING DOCTOR.**—A few days ago, writes a clergyman, I attended the funeral of a young man a member of my congregation. He had met with a slight accident while travelling on one of our railroads, and the medical man who was called in, being somewhat under the influence of liquor, dressed the wound improperly. The result was inflammation and death. It had been better that that doctor had been reeling drunk. The testimony of other medical men was that had the wound been properly dressed, the young man would certainly have recovered. And now an aged mother, a widow, and an infant family are left to mourn through life, in consequence of that physician's moderate drinking—for no one had ever seen him drunk. Were the truth known, we believe this is by no means a solitary case. Yet "there is no harm in moderate drinking," say men.

**TREATMENT OF CHOLERA IN INDIA.**—Dr. Murray reports that "the use of stimulants has much increased of late years, and so has the rate of mortality." He refers to one outbreak, in which stimulants were very largely given, and the mortality in 127 cases was 92·913 per cent. The employment of wine and brandy in large quantity is condemned by the most experienced medical authorities, and there are many who believe that stimulants not only tend to prevent reaction, but also to excite dangerous fever and delirium. Deputy-Inspector General Cox says:—"Alcohol, next

to opium, does more harm than any remedy I know of"; and Dr. Murray, while he admits that it is objectionable to interfere with the private judgment of the executive officers, yet suggests that the excessive use of stimulants should be controlled by the administrative authorities.—*Times, Oct. 7.*

**ASYLUMS FOR INEBRIATES.**—In the British North American Provinces, at the present moment, there is considerable agitation on the subject of asylums for inebriates. The Legislatures of Ontario and Nova Scotia have been memorialised in favour of the establishment of such institutions. Petitions will be presented to both bodies at their next sittings, and it is anticipated that the Dominion Parliament will also be requested to do something in the matter, and a strong pressure has been brought to bear on the Legislature at its next session, with the view of obtaining a grant from the Treasury towards the erection of suitable building or buildings for a home for inebriates in Nova Scotia. In the United States it has been estimated that fully *eighty per cent.* of those treated in inebriate asylums have been reclaimed and continued faithful to total abstinence principles.—*Medical Press and Circular.*

**A NEW TEST FOR ALCOHOL.**—A medical correspondent writes:—"For some time past the principal test for alcohol has been its reaction with chromic acid. Permit me to call the attention of your readers to a new test for alcohol, discovered by the Continental chemist, Lieben, a notice of which is published in the second number of *Nature*, November 11, 1869: 'The liquid under examination is heated in a test tube, into which are then introduced a few grains of iodine, and a few drops of potash solution (Liquor Potassæ); whereupon, if alcohol is present, a yellow crystalline precipitation of iodoform is produced immediately, or after some time, according to the degree of dilution of the liquid.' This test is found applicable to the distilled contents of the urine, very quickly after imbibition. In addi-

tion to the above the same paper states that M. Bouvier affirms as 'the result of experiments on rabbits, that alcohol lowers the temperature of the body, in small doses to a slight, in large doses to a very marked, degree.'"

PROFESSOR SILLIMAN ON ALCOHOL AS A MEDICINE.—"I yielded for a time," he says, "to the popular belief that good wine and cordials were the lever which would raise my depressed power, but the relief was only temporary. . . . No medical man informed me that I was pursuing a wrong course; but the same wise and good friend to whom I had been already so much indebted, Mr. Daniel Wadsworth, convinced me, after much effort, that my best chance for recovery was to abandon all stimulants and adopt a very simple diet, and in such quantities, however moderate, as the stomach may be able to digest and assimilate. I took my resolution in 1823, in the lowest depression of health. I abandoned wine and every other stimulant, including for the time even coffee and tea. Tobacco had always been my abhorrence. . . . I persevered a year in this strict regimen—of plain meat, vegetables, bread, and rice—and after a few weeks my unpleasant symptoms abated, my strength gradually increased, and health—imperceptible in its daily progress, but manifest in its results—stole upon me unawares."

TEETOTALISM *v.* AMPUTATION.—Dr. John Jeffrey, Ayton, Berwickshire, in a recent speech, said that, according to his experience, which had not been very small now, for he had been nearly forty years in the profession, an abstainer had a better chance of recovering from severe injury than even a moderate drinker. He recollected one case in point which occurred during the formation of the North British Railway. A labourer had sustained a very severe injury in one leg, and had the other broken. He went, along with another medical man, with his instruments prepared to amputate the poor fellow's limb. Everything was ready to proceed with the operation, but the thought suggested itself to him, "Now, if this

man does not drink, I think he has a chance." He went to his bedside, and said to him, "Upon your honest reply to my question depends your keeping your leg. Have you been in the habit of using strong drink within the last six or eight years?" The man replied most emphatically, "I have not tasted drink for ten years;" upon which he said, "Then I will spare your leg." He had no doubt whatever on the subject, and he did not amputate the limb, and in six weeks from the time he first saw him after that severe injury, the man walked upon crutches a distance of half-a-mile to get into a coach to go home to Edinburgh.

STIMULANTS IN TYPHOID FEVER.—He might say that fevers were better treated without than with stimulants. He thought that had now come to be a general opinion in the profession. They must all be aware that a most eminent physician in Glasgow—Professor Gairdner, and he was no mean authority—thought that the use of milk and nutritious diet was much superior to the use of alcoholic stimulants in the cure of fever. He had just had an opportunity of fairly trying this in his experience. He tried it upon a little girl of about six years of age who had typhoid fever. An aunt with whom the girl lived was a most intelligent woman, and he thought he would try to give the girl nothing but milk and nutritious diet. The aunt agreed to do so; and the case went on well, although it was a severe attack of fever. The little girl was recovering favourably, when one day he found, to his amazement, a great increase of fever. He questioned the aunt as to what could be the cause of it, when she burst into tears, and replied that she had been foolishly prevailed upon by a neighbour to give her a glass of wine. This neighbour had said to her, "Oh never mind that doctor; he's a teetotaler;" but the woman saw that the child was worse, and she traced the effect to the proper cause—the taking of the alcoholic stimulants. However the fever passed off in a few days; and he was happy to say that the girl made a capital recovery.—*John Jeffrey, M.D., Ayton.*

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NUTRITION AND STIMULATION.

WE propose, in the present short paper, as far as time and opportunity allow, to review the natural sources of strength and growth in the animal creation, and to trace the development of organised beings from their rudimentary condition to a state of perfect physical development, by the imbibition and assimilation of a few simple proximate vegetable and animal substances, and to show how the most perfect forms of animal development are attained by nature without the aid of one drop of alcoholic fluid.

If we review the whole animal creation from the monsters of the antediluvian age, the giants of old, or the massive forms to be seen in various parts of the world in our own day, down to the humblest zoophyte washed upon our shores, we cannot but be struck with the similarity of means provided in each and all of these creatures for the growth, sustenance, and repair of their beautifully constructed organisations. They are all endowed with life which originates for the most part from beings of their own kind. Simply elementary matters are given off from the parents, and when once the germ of life is as it were begun, that germ seems to have the power of slow growth by the appropriation and assimilation of a few nutritious matters by which it is surrounded, until it shall have reached its maximum degree of physical development, and become the most perfect type of its class.

Nutrition, either in its most simple form of the imbibition of a watery fluid, or in its more complex condition of digestion and assimilation, as in the more elaborate organs of man, *is the grand and universal medium by which the structure* of all organised beings both now, and in every age from the remotest periods in history, has been built up; by which animal strength has been maintained, and by which every repair that has ever been necessary has been accomplished. Looking at the whole animal crea-

tion we are struck both with the *universal* provision made for this process, the infinite variety of organs formed for its continuance, and on the other hand the utter absence of any other means short of this by which life, strength, and growth are continued ; organs more or less intricate exist in every organised being, by which that being can appropriate and assimilate substances to itself from the world surrounding it, by the appropriation of which that being shall “renew its life,” and acquire strength to play its part in existence ; by which it shall replace that force which is given out from day to day, and by which every injury which it sustains shall be repaired throughout its life. Stop the process of *nutrition* in any organised being, and we stop its life, by a gradually increasing weakness, or a cessation of those processes which nature has provided for its daily renewal. The law is universal, and without exception. All organised bodies are subject to periodical renewal : with a healthy performance of this function, and a due supply of *suitable* material, a long life of health and strength can be maintained ; without it life will ebb away in a few hours, or at most in a few days. We know of no means to substitute this universal law ; nor has nature provided a single other way by which life, health, or strength can be maintained, even for the shortest period of time.

Having now seen the universal prevalence of this law throughout the animal world, let us look to the material by which this law of nutrition is carried out—the medium by which it is effected, and we shall find that it is governed by laws as simple and as universal. In the vegetable world, which also grows and thrives by nutrition, although in a somewhat different way, the food is simple, and in all plants bears a great resemblance. For the most part the food of vegetables consists of *water*, holding in solution various organic and saline substances. Water percolates through the soil, dissolves various organic matters, and these being imbibed by the roots of plants, are taken up, and build up their structure until they have attained their maximum growth. No provision is found in nature for the supply of alcoholic fluid to any of the members of the vegetable creation. Whether we look to those higher and nobler members of this class, the stately oak, of two hundred and three hundred years’ growth, with all its strength ; the cedar of Lebanon with its beauty ; or the humbler and more minute mosses of the field, we see them in all their magnificent grandeur, and in their utmost perfection, developed and grown without ever having come into contact with one drop of alcoholic fluid. *Water* is nature’s constructive fluid, it pervades all animal and vegetable creation, and forms the largest percentage of both animal and vegetable life.

In the animal world, too, the materials required by the nutritive

processes are few and simple. They consist of certain proximate elementary substances, existing in the vegetable and animal world, and well known to modern chemists. The elements of water exist more or less in all of them, whilst it forms the grand solvent by which almost all of these substances are rendered soluble, and conveyed into the body which they are destined to build up, and to renew. *No form of alcoholic fluid is ever found by the chemist existing in a natural state either in the vegetable or animal world,* or entering into the structure of any of the members of either class, during a state of life, or in that state in which they are fit to form the food of other beings; but water is universally present in every organic structure, forming as it were its basis, and to a great extent its food.

Viewing the vast and endless expanse of waters which form the ocean of our globe, we see with delight the endless and beautiful forms of animal life which everywhere exist. Myriads of creatures in their infinite variety and magnitude have been built up and formed under conditions in which it is impossible for alcohol to exist. The strength of the whale was built up by the simple laws of nutrition, with *water* as a solvent. The nutrition of some of the minuter forms of animal life, is no doubt almost entirely effected by water holding various organic matters in solution, and this fact is well known to some of our best microscopists who study these forms of animal life. Thousands of these minute creatures exist in water. Alcohol has no place in their structure, and if only a small quantity be placed artificially in the water in which they live, they immediately die.

Advancing to our own species, and the animals more closely allied to man, we find that there are certain proximate vegetable and animal principles which form the common pabulum of all. These, so well known by the researches of modern chemistry, consist of two great classes. 1. The azotised, or those containing nitrogen in their composition, and which are flesh formers. 2. Those non-azotised substances which contain various modifications of carbon, hydrogen, and oxygen in their structure. They are generally found diffused throughout those portions of the vegetable and animal kingdom which are destined for the food of animals, and whether they exist in the one or the other, there is a great similarity between them. They may be roughly stated to be *fibrine*, albumen, casein, proteine, starch, sugar, gum; and from these substances alone, in more or less combination with *water*, all *growth*, all *strength*, and all *repair* must be effected, after they have been duly digested and appropriated by the animal that exists upon them. They are all various combinations of the elementary bodies, *carbon*, hydrogen, nitrogen, and oxygen, with a little phosphorus and sulphur. No alcohol exists in any of

these substances whilst they are in a fit state for the nutrition of any living being. Sugar, which is a nutritive medium in itself, when destroyed or fermented to form alcohol, becomes a poison which strikes at the root of all nutritive processes, and thus so far injures the source of all strength, *i.e.* nutrition of the body.

We regret that time will not allow us here to enter into the physiology of digestion, beautiful as the process is. All alcoholic fluids are antagonistic to this process, and in the exact ratio to their alcoholic strength. Introduced into the stomach during digestion, they are known to decompose the gastric juice and pepsin, upon which the solution of the food depends. They harden animal matters, and render them more or less insoluble in proportion to their strength. They coagulate albumen, inflame the inner coat of the stomach, destroy the sensibility of its nerves, and, in the words of an eminent physician, it is "simply impossible for digestion to go on whilst strong and ardent spirits are in the stomach." Here, then, is alcohol striking at the very root of all the nutritive processes of the body. Impaired digestion causes a deterioration in the quality of the chyle, and this again gives rise to deteriorated blood, and inferior blood to the thousand other ills caused by the circulation of fluid unfit for the nutrition of the body; whilst in the blood alcohol is known to materially injure the blood globules, to shrivel them up, besides preventing the elimination of effete matters. The blood of alcohol drinkers is always inferior; besides this poison, it is carbonaceous and venous, loaded with matters which ought not to be there. The nutrition of the whole system is interfered with. The life's blood is poisoned and rendered unfit to nourish the body. Alcohol seeks its exit in the form of alcohol as it went in, leaving little, if any, of its own substance behind it, but inducing a series of marked changes which are antagonistic to every vital nutritive process, and which are without doubt sources of weakness in all who use it.

We have seen how *true* nutrition in the animal body is the source of all strength, how few and how simple are those substances required in the nutritive processes, and how all forms of alcoholic fluids are opposed to these processes, and therefore sources of weakness. The truth of our assertions may be readily proved by any one. Take a man who has attained his maximum degree of health and strength, and such a man is only to be found amongst the *water* drinkers; test his strength, and if it be that of a Samson, so much the better for our experiment. Supply him with a few glasses of ardent spirits, and then little by little try his strength again—by lifting a given weight—and it will be found that in the course of a few minutes his strength has diminished, and in the very exact ratio to the quantity and strength of the spirit given. Carry an experiment further, and that man will

become so weak that he will not be able to sustain his own weight!

The whole thing appears to be so plain, and so lucid, after many years of thought and reading, that we are ashamed to urge such elementary matters upon the notice of our readers; nevertheless a vast amount of ignorance prevails upon such subjects, and it is only to be combated by going over and over again the simple and elementary laws of physiology and nutrition. Not one in ten thousand of our alcohol drinkers knows what he is drinking or the effects of his drink. There is a deplorable amount of ignorance existing amongst all classes of society upon this subject. The special action of alcohol, according to the latest revelations of physiological and chemical science, should be taught in all our schools and colleges to all the rising generation of men, and especially to the members of the learned professions. Such matters form no *special* part of a medical education, and they are too important to be left to be acquired in after life; amidst the struggle for a standing and position they may be lost sight of, or never learnt, and one of the grandest truths ever known will have been missed, and lost to the individual, as well as to society at large. Instead of being educated upon this question, the members of all professions are too often *educated* in the drinking delusion by fellow-students during their college career, when as yet they know nothing of the effects or the ulterior consequences of their foolish habits; forgetting or not heeding the memorable words of Prior:—

“ Unhappy man whom sorrows thus and rage,  
Two different ills, alternately engage.  
Who drinks, alas! but to forget, nor sees  
That melancholy, sloth, severe disease,  
Memory composed, and interrupted thought,  
Death's harbingers, lie latent in the draught.  
And in the flowers that wreath the sparkling bowl  
Fell adders hiss, and poisonous serpents roll.

If men thought more, and knew more, there would be less demand for “Eau de Vie,” or more properly “Eau de Mort.”

We hail with delight the strides of modern chemistry and physiology, and especially as they bear more and more upon the truth of these principles. Take the standard work of the day on Physiology, Dr. Carpenter's “Human Physiology,” edited by Dr. Power, last edition, 1869, and upon this question we find the following significant words:—

“The use of alcohol in combination with water, and with organic and saline compounds in the various forms of fermented liquors, deserves particular notice on account of the numerous fallacies which are in vogue respecting it. In the first place, it may be safely affirmed that alcohol cannot answer any one of those important purposes for which water is required in the system; and that

on the other hand it tends to antagonise many of these purposes, by its power of precipitating most of the organic compounds, whose solution in water is essential to their appropriation by the living body. Secondly, the ingestion of alcoholic liquors cannot supply anything which is essential to the due nutrition of the system; since we find not only individuals but whole nations maintaining the highest vigour and activity both of mind and body without ever employing them as an article of diet. Thirdly, there is no reason to believe that alcohol in any of its forms can become directly subservient to the nutrition of the tissues; for it may be safely affirmed that in common with non-azotised substances in general, it is incapable of transforming into albuminous compounds, and there is no sufficient evidence that even fatty matters can be generated in the body at its expense. Fourthly the alimentary value of alcohol, *if it possess any*, consists merely in its power of contributing to the production of heat. (?) The experience of Arctic voyagers is most decided in regard to the low value of alcohol as a heat-producing material. . . . The action of alcohol is that of a stimulant (?) followed by a corresponding depression of power which is the more prolonged and severe in proportion as the previous excitement has been greater. The physiological objections to the habitual use of alcoholic liquors rest upon the following grounds. 1. They are universally admitted to possess a poisonous character when administered in large doses. Death being a speedy result, through the suspension of nervous power, which their introduction into the circulation in sufficient quantity is *certain* to induce. 2. When habitually used in excessive quantities, universal experience shows that alcoholic liquors tend to produce a morbid condition of body at large, and especially of the nervous system. This condition being such as a knowledge of the *modus operandi* in the body would lead the physiologist to predicate. 3. The frequent occurrence of more chronic diseases of the same character amongst persons advanced in life, who have habitually made use of alcoholic liquors in 'moderate' amount, affords a strong probability that they result from a gradual perversion of the nutritive processes, of which that habit is the cause. This perversion manifests itself peculiarly in the tendency to fatty degeneration of the muscular substance of the heart, of the walls of the arteries, of the glandular substance of the kidneys and liver, and of many other parts, and this gives rise to a great variety of forms of disease. 4. Especial liability of the intemperate to zymotic diseases seems an indication that the habitual ingestion of alcoholic liquors tends to prevent the due elimination of the azotised products of the disintegration of the system, and thus to induce a fermentable condition in the blood. 5. Extended experience has shown that notwithstanding the temporary augmentation of power which may result from the occasional use of fermented liquors, the capacity for *prolonged* endurance of mental or bodily labour, and for resisting the extremes of heat and cold, as well as other depressing agencies, is diminished rather than increased by their habitual employment. On these grounds the author has felt himself fully justified in the conclusion that, for physiological reasons alone, habitual abstinence from alcoholic liquors is the best rule that can be laid down for the great majority of healthy individuals."

Having briefly glanced at the physiological and chemical aspects of this question, we propose in a subsequent paper to trace alcohol in a more extended manner throughout the body, and to point out the diseases produced by it.



## HEREDITARY EFFECTS OF INTEMPERANCE.

It has been well said by one of the ablest writers on the Temperance question, that the evil effects of intemperance are not even now fully understood and appreciated. We are able to estimate pretty fairly the influence of the drinking habits as producing causes of vice, pauperism, crime and insanity ; we can reach an approximate, but perhaps, after all, an imperfect calculation of the waste of human energy and material wealth that our drinking system brings with it, but it is impossible to measure the amount of moral evil brought upon the human family by this one cause. Perhaps the one part of it most overlooked, because it is the least apparent to ordinary observation, is the amount of imbecility, weakness and disease that is transmitted from parents to offspring, through indulgence in stimulants. The effects of vice do not end with those who practise it, but are sent down through succeeding generations, fulfilling the conditions of the Divine law, "I will visit the sins of the father upon the children, even to the third and fourth generation, of those that hate Me and keep not my commandments." It is much to be deplored that our schools of theology should so often and so stoutly have opposed the teachings of philosophy, under the false assumption that philosophy was opposed in many ways to Divine truth. There is a philosophy, and such has been known to all ages, which is just as false as it is presumptuous ; and so has there been a spurious religion, which has brought a scandal upon the pure name of Christianity. Both have to be avoided and rebuked, but the existence of false systems is no argument against our acceptance of those which are true. Now, true religion must be in harmony with true philosophy, as they are both the emanations of wisdom from above. No one truth can oppose another truth. The great book of nature is as much a revelation of the Almighty will as the written word, and when both are consulted with the humble and earnest desire for instruction, each will assist in a correct interpretation of the other. Those who will thus seek the truth, "looking through nature up to nature's God," will discern in the law given on Sinai, and which we have quoted, not a vindictive and harsh sentence upon the creature, as some sceptics have pronounced it, but a merciful dispensation of the Creator, a warning of the most solemn kind against indulgence in sin and acts of uncleanness, and as supplying one of the highest motives to a chaste and holy life. There is no human enjoyment so unmixed with alloy—that, being of earth, reminds the thoughtful mind of what he is taught to expect in heaven—as that which is found in the bosom of a happy

family. Healthy and cheerful children around the hearth are acknowledged to be the cream of earthly felicity. Now, supposing that our youth were taught the true bearing of the Divine law, that the consequences of dissipation or vice may be visited upon a future offspring, would not this supply a motive to a life of abstinence and self-constraint? and although it might not be sufficient as a safeguard in itself, it would strengthen the admonitions of the Gospel. It is time that our youth should be taught the great and important truth that the laws of God have all a relation to man's well-being here, as well as to his happiness in a future state; that a healthy mind is not possible with a diseased body, and that in order that a man may be able properly to discharge his duties, he must have health, a body free from disease. This is the teaching of science as well as of religion.

In no particular is this teaching more important than in relation to our national intemperance. We see around us, in great numbers, persons who abridge their rational enjoyments, destroy their comfort, bring on disease, and shorten their lives through intemperance, and so far we are alive to the evils that strong drinks introduce, but we do not sufficiently reflect that the offspring of such parents are also sufferers to a large extent. They often inherit the diseases of the parents, and where the inheritance is not in the shape of disease, it appears in defective bodily organs, in feeble development, and such feebleness and defects predispose to intemperance as well as to disease. It is certain that the face and figure of parents are not more clearly repeated in children than the appetites and passions, and the various tendencies of mind and body. The world is full of examples, and some of the more striking ones appear conspicuously before our courts of law. It is common to hear of hereditary gout, insanity, rheumatism, and other diseases, and very often some particular kind of lasciviouness in one or both parents will re-appear in the offspring of both sexes. In works upon insanity this has been treated very fully, but is too abstruse a subject for discussion in our general literature, and is one that cannot be rendered popular. It becomes, however, the duty of those who are teaching the principles of true temperance to explore this field of inquiry, and it is one that must be undertaken without hesitation or timidity. We believe that such investigations, scientifically conducted, will show that the delusion as to the properties of strong drinks is at the foundation of more than half the physical and moral evils of the world.

It was with much satisfaction that we perused the first essay in a work by Dr. Elam, published last year: "A Physician's Problems," the essay *On Natural Heritage*. In a clear and forcible style he has laid before us the fruits of much research,

and has drawn most irresistible conclusions. He has cited history, sacred and profane. He says, "The doctrine of hereditary transmission of qualities, both corporal and mental, had a somewhat singular fate amongst philosophers, inasmuch as it has met with almost universal acceptance as a matter of fact and theory, yet has been almost completely ignored as to its practical bearing by moralists and legislators." He might, with equal truth, have said that divines had done something more than ignore it, and had often condemned it as a doctrine opposed to certain tenets held by the Churches to which they belonged. It is, nevertheless, the teaching of the Bible. Dr. Elam says, "The sacred writings abound with the recognition of natural heritage. . . . It was a cutting reproach to the Jews, but was not considered, even by them, as illogical or inconsequent to say, 'Wherefore ye be witnesses unto yourselves, that ye are the children of them which killed the prophets: Fill ye up then the measure of your fathers.'" He says again, "The opinions of thoughtful men of later times may almost be summed up in the words of the profound physiologist, Burdach, 'That heritage has, in reality, more power over our constitution and character, than all the influences from without, whether moral or physical.'" Dr. Elam proceeds to combat the objections which have been urged by the opponents of the doctrine of natural heritage, such opponents having been found among metaphysicians, moralists, theologians, and legislators; but, did our space permit, it would be unnecessary to argue against objections which are set aside by the common sense of mankind. Dr. Elam very properly says, "Either the doctrine is true or it is false; if the latter, this must be proved by facts, and not by *ex post facto* considerations; if the former, any attempt to deny or ignore it, simply to evade difficulties, is merely criminal."

Although much tempted, we hasten over some of the most valuable portions of the essay to that which falls strictly within our province—the heritage of drunkenness. Dr. Elam says:—

"All the passions appear to be distinctly hereditary—anger, fear, envy, jealousy, libertinage, gluttony, drunkenness—all are liable to be transmitted to the offspring, especially if both parents are alike affected; and this, as has often been proved, not by force of example or education merely, but by direct constitutional inheritance.

"One of the most important of these, and the most easily illustrated, is that of the heritage of drunkenness. *Ebrii gignunt ebrios*, says Plutarch. Gall relates the case of a Russian family, where the father and the grandfather had both died prematurely from the effects of intoxication, and the grandson manifested from the age of five years the most decided taste for strong liquors. M. Giron relates instances where the tendency was transmitted through the mothers. A recent writer in the *Psychological Journal* says: 'The most startling problem connected with intemperance is, that not only does it affect the health, morals and intelligence of its votaries, but they also inherit the

*fatal tendency, and feel a craving for the very beverages which have acted as poisons on their system from the commencement of their being !'* Some illustrations are given by the same writer. Mr. J. — was an habitual drunkard ; his wife also had a *stomach complaint*, for which she took spirits ; her medicine was never neglected. Both died confirmed drunkards, *and all the children did so likewise.* They said, 'We can't help it, we inherit a strong love for gin or rum.' One bound himself by a heavy penalty, but after some months' abstinence broke out, saying that '*the craving was actual torture, and he could not help himself.*' Mr. B. —, of Yorkshire, and his wife were scarcely ever sober ; the lady died early of delirium tremens, but the husband lived long in spite of his tendencies. Out of a large family of children only one escaped the taint ; the eldest son, an inveterate drunkard, committed suicide, and all the others came to an untimely end. The only daughter was, on one occasion, brought home by the police in a state of intoxication. The shock was too great for the old man, and he did not survive it. A frightful additional testimony to the ineradicable nature of an inherited tendency to drink is given by M. Morel, than whom no living writer has entered more deeply into these important investigations. He says: '*I have NEVER seen the patient cured of his propensity whose tendencies to drink were derived from the hereditary predisposition given to him by his parents.*' Mr. W. Collins stated before a Parliamentary Commission, as the result of his experience of drunkards, and as a '*well-established physical fact,*' that the drunken appetite, when once formed, '*never becomes completely extinct, but adheres to a man through life.*' Dr. Hutcheson's experience is to the same effect. He remarks of the chronic form: '*I have seen only one case completely cured, and that after a seclusion of two years' duration.* In general it is not cured, and no sooner is the patient liberated than he manifests all the symptoms of the disease. Paradoxical as it may appear to be, such individuals are sane only when confined in an asylum.' The annals of vice teem with illustrations of this fearful inheritance ; in selecting cases there could be no difficulty, save that of choice. I am here only concerned to indicate the *fact* of this inheritance ; I shall hereafter return to it, to point out the moral and physical transformations produced in successive generations under its influence."

So far Dr. Elam. We had ourselves marked for citation several passages from authors of celebrity, and whose works have become text-books, but our limited space precludes their insertion. On a subsequent occasion we shall have to follow the subject, as Dr. Elam indicates, into "the moral and physical transformations"—upon its effects in producing degeneracy of race. We can only now offer a few considerations suggested by a momentous subject, and ask our readers to apply the facts we have given to the existing state of society. There is no observing man who will not recollect within his own social circle, if not in his own family, some apt illustration of the evil this article is intended to point out—the danger of drinking to the persons indulging in it, the pernicious influence of the example, and the dreadful consequences upon the children who are born to them. Those who will not pay proper attention to this warning, "*neither would they believe although one rose from the dead.*" In contemplating such facts and such results, are we not correct in stating that the evils of intemperance, in all their heights and depths, are imperfectly understood ? The youth who have to

become the fathers and mothers of another generation, are taught to regard as a good familiar creature the drink which, in so many instances, is productive of fearful mischief, and which is in fact more fruitful in misery than the united evils of war, famine and pestilence. Women, during the period of gestation, when every trifling accident may have, and when the food and exercise undoubtedly have, an influence upon the unborn, take wine or beer freely, and the same practice is kept up when nursing the child. Can we be surprised that we have so much intemperance? that we should have a demand for hospitals for the treatment of dipsomania? and that we should have our asylums crowded with the insane? Hitherto, the Temperance cause has had to work without much direct aid from those who lead scientific opinion; but in the face of facts such as we have quoted, and the daily evidences of what our drinking system is doing to demoralise the community, that apathy cannot be continued, or, if it does, still worse results than any we have yet experienced will follow. Against bad seasons and commercial derangements the nation may contend, for there is a recuperative influence always at work, a restoring power constantly in operation, but the potency of these depend upon the stamina of the people. So long as that is sound, we may encourage hope. There is a tendency in evil, as there is in disease, to exhaust itself; but there is one condition of things that inevitably leads to ruin and decay, and that is, the physical and moral deterioration of a population. Voluptuousness has been the canker at the heart of all great empires, and has effected that which no foreign foes could accomplish. The drinking system is working at the very root of our prosperity, and it promotes every other kind of licentiousness. It is the writing on the wall that requires no second Daniel to interpret.



## MEDICAL REFORM IN THE USE OF STIMULANTS.

THE friends of temperance have good grounds for believing that their opposition to the unscientific and indiscriminate use of alcoholic stimulants in disease is producing beneficial changes of opinion and practice in the medical profession. For though there is still a want of accurate knowledge as to the mode of action of alcohol, and still a disposition to prescribe wine and other alcoholic liquors as a matter of course, yet among the more intelligent members of the profession there are encouraging signs of reform. Some of the erroneous ideas as to the value of alcohol in disease have been exposed; in cases where intoxicating drinks have been prescribed, the patients have refused to take these

drinks, and have recovered their health without the aid of alcohol. These cases have occurred in all parts of the country, and in numbers sufficient to justify us in asserting that these drinks are frequently prescribed when they are altogether unnecessary, and when their use may be followed by the production of intemperate habits. It is not to be expected that deep-rooted errors and long-established practices will be changed in a day. Reform in the medical use of alcoholic stimulants will be a work of time. There must be agitation, inquiry, controversy, and experimental investigation, before the rule in medical practice will be the use but not the abuse of alcohol. But there are signs of reform. The *Lancet* of the 1st January contained a most important leading article on alcoholic stimulation in disease. We have given the whole of this article in another part of this journal. It deserves a careful study by every one interested in the question of the medical use of alcohol. The *Lancet* states that, after many fluctuations of professional opinion upon the question of alcoholic stimulation in disease, some real progress has been recently achieved. This is certainly true. Dr. Todd's views respecting alcohol are no longer advocated; but the more reasonable views of Drs. Gairdner, Wilks, Anstie, and others, are now in the ascendant. But we, in common with the *Lancet*, fear "there is still a good deal of irrational practice." We are constantly hearing of cases in which wine and other alcoholic liquors have been prescribed without any reasonable ground for their employment. In some cases these drinks are ordered to please the patients; in other cases to satisfy the ignorant relations or friends of the sick. In spite of the spread of education and the increasing diffusion of chemical and physiological knowledge, most deplorable ignorance still prevails as to the properties of alcoholic drinks. One might have supposed that the example of the teetotalers giving up the use of these drinks and living so well without them, would have taught the people before this that these drinks are never needed in health, and seldom if ever useful in sickness. We think that medical men who know the uselessness and pernicious tendency of alcoholic drinks, are highly culpable in prescribing these drinks merely to please patients or their friends. But every allowance must be made for those medical men who are under the influence of alcohol, and who fancy that a moderate portion is necessary for their own health and comfort. These gentlemen are prejudiced in favour of strong drink, and they will require the practice of abstinence to set them free from alcoholic delusion, the same as any other class of the community. When a medical man carefully observes the effects of abstinence upon large numbers of persons in various classes of society, and especially when he tries abstinence in his own case, his ideas regarding alcoholic drinks

undergo a great change. We know many medical men who have tried abstinence for various periods of time, and they all allow that great errors prevail in reference to stimulating drinks. It seems as if there were a great gulf between the people who use alcoholic drinks and those who abstain from their use. Those who use these drinks feel a sort of necessity for them which can only be got rid of by ceasing to take them; but those who practise abstinence obtain freedom from the desire for alcohol. When persons in the habit of drinking alcoholic liquors become ill, they naturally enough look for their accustomed stimulant. On the other hand, when teetotalers, who have lived for years without these stimulants, become ill, they cannot generally be convinced that alcoholic drinks are either necessary or useful. It requires then considerable experience and discrimination to know under what circumstances alcoholic stimulants are needed. The *Lancet* says:—

“ It seems to us that the outlines of a greatly improved knowledge, both of the therapeutic powers and the capacity for mischief which alcohol possesses, may now be discerned.”

We rejoice at the improved knowledge on the subject. We have long seen the necessity for improved knowledge, and we know there is still room for further improvement. We fear, however, that the capacity for mischief which alcohol possesses, is not yet fully seen. If we were to judge of its capabilities for mischief by the evils flowing from its use, we should be compelled to pronounce it the most mischievous and the most dangerous of all the things used in this country. If its dangerous character were generally known, parents would never teach their children to drink liquors containing it, and when it was used in disease it would be ordered with as much care as any other poison. Its most dangerous property, however, is its power of making people feel a necessity for its use, and a belief in its virtues. It is this property which makes its use in disease specially objectionable. Many victims of intemperance owe their unhappy condition to the medical recommendation of wine or other alcoholic drink. The question, then, as to alcoholic stimulation in disease has a moral aspect as well as a physical one, and therefore we consider it of high importance that alcoholic stimulants should only be used in cases where they are absolutely necessary. And it is a debateable question as to what diseases there are in which alcohol is really required. Some medical men have renounced its employment in cases in which it had previously been used, and the best results have followed their disuse of alcohol.

The *Lancet* gives an account of the present state of opinion as to the action of alcohol in acute disease. It says:—

“In the first place, as regards *acute* diseases, attended with febrile phenomena, three things are tolerably plain. The first is, that alcohol, when it acts well, acts as an antiphlogistic stimulant; that is to say, it lowers abnormally high temperature, it reduces the frequency of the pulse, and while raising nervous power, it calms those disturbances of the nervous system which attend, if they are not caused by, the elevated temperature of the blood in pyrexia.”

Now admitting that alcohol can act in this way, the question naturally arises whether there are not other means of accomplishing the same ends equally as effective as alcohol? It is not our purpose in this journal to advocate any particular method of treating disease. But we know that the abnormal temperature of the body can be readily reduced without the use of alcohol, and that the disturbances of the nervous system may also be calmed without alcohol. The *Lancet* says:—

“The second great fact is, that there are the utmost differences between different pyrexial patients as to their capacity for receiving benefit in this way; that a large number of persons, especially among the young and the previously robust, do best without any alcohol.”

That a large number of persons may be successfully treated without any alcohol, has been clearly demonstrated by Dr. Gairdner at the Glasgow Royal Infirmary, and by Dr. Russell at the Glasgow Fever Hospital. The *Lancet* further says:—

“The third settled fact is this, that it is often in those cases where alcohol used (on purely theoretical grounds) to be thought most dangerous—viz. in cases with very high temperature and flushed face—that it produces its best effects; and that to pour large quantities of stimulants into a fever patient simply because he is pale, and has a small pulse, is an unwarrantable proceeding.”

The former theory was that alcohol produced heat; now the theory is that it reduces the temperature of the body; this perhaps may soon be given up, and some new ideas respecting alcohol be established. There are some reasons for believing that even in acute disease more effective and less dangerous agents than alcoholic stimulants may soon be generally used. The *Lancet*, after discussing the way in which alcohol acts in acute disease, concludes that part of the subject with this caution:—

“One thing is certain: if signs of narcotism—*i.e.* paralysis of the nervous system—are produced, the alcohol is doing harm, and must be immediately diminished or stopped.”

This is one of the difficulties connected with the employment of alcohol—it is a narcotic. Or, if we adopt Dr. Anstie's view, it is a stimulant in small doses, and a narcotic in large doses. The point then is as to the dose. Now there is a most astonishing difference in the quantity of alcohol which some patients can bear compared with others without the production of symptoms of narcotism. Hence no rule can be laid down as to quantity. There is another difficulty in the use of alcohol. In private prac-

tice when wine or other stimulants are ordered, the patients and their friends are apt to go far beyond the prescribed quantity, under the idea that it is not possible to have too much of a good thing, and in this way fatal results are sometimes produced.

Although we do not fully agree with all the *Lancet* has advanced in reference to the use of alcohol in acute disease, we fully concur with all its remarks upon the prescription of alcohol in nervous affections and debility. The *Lancet* justly observes that—

“It is much to be regretted that a large number even of highly educated practitioners will persist in acting on the assumption that in non-febrile diseases the amount of alcohol to be administered ought to be measured by the degree of debility, merely as such.”

The consequences arising from this assumption are of the direst character. The reckless prescription of alcoholic liquors for nervous weakness and debility has driven hundreds “into drunkenness or lunacy, or both.” We are glad to find the *Lancet* denouncing with all its power this terrible abuse of alcoholic stimulants.



## ETHER INTOXICATION.

ALCOHOL is the popular intoxicant in this country, and in the form of wine, beer, and spirits is used by all classes; there are, however, other inebriants extensively employed. Opium, ether, chloroform, and other narcotics, have their devotees, who use them for the same purposes as other persons take fermented or distilled liquors. It is true that opium, ether, and other narcotics are not taken so openly as alcoholic drinks, nor are they yet blended with the social customs of our country. We do not drink toasts with ether, nor cement the bonds of friendship with chloroform. There are not so many popular errors respecting other narcotics as there are respecting alcoholic liquors, but the consumption of other intoxicants is carried on to a sufficiently large extent to alarm all who are anxious to see the people possess sound minds in sound bodies. The friends of temperance are labouring to preserve the people from the noxious influence of alcohol, and of course they will be equally zealous to prevent intoxication by any other agent of mischief. It appears from a communication by Mr. Draper in the *Medical Press and Circular* of the 18th of February that in certain parts of Ireland ether is becoming as popular as whiskey. Mr. Draper says:—

“That any condition of things should arise which should take a nauseous fluid like ether from the pharmacopœia and the laboratory of the chemist, and make it the recognised stimulant of any set of men, and that with them it should supplant alcohol—that they should take ‘nips’ of ‘ether’ morning, noon,

and night, as they would whiskey, and—for anything shown to the contrary—drink good luck, or ratify bargains in a glass of ether, was not a thing to look for, and is, perhaps, without parallel in the history of narcotic stimulants.”

Mr. Draper calls ether a “nauseous fluid;” that is a matter of opinion. As far as our taste can guide us in forming an estimate, we should say that whiskey is quite as unpleasant as ether, but the use of either for a short time will render it palatable. The ether is made with methylated spirit, and it is sold at a price low enough to render it a popular stimulant. The Government conferred a boon upon practical chemists and manufacturers when they allowed spirits of wine mixed with methylic alcohol to be sold free of duty. But if it is found that this liberality furnishes the means for supplying ether at a low rate for purposes of intoxication, we may expect that the Government will interfere, and prohibit the manufacture of ether with methylated spirit, and thus prevent the spread of ether-drinking, and injury to the revenue by the disuse of whiskey. Mr. Draper says:—

“The wholesale price of a pound of ether made from pure spirit is five shillings, but a pound of methylated ether is sold in Tyrone and Derry for one shilling and sixpence. As there are about seven and a-half pounds in a gallon of commercial ether, a gallon costs eleven shillings and threepence. Now, if we assume the ordinary quantity taken at one time to average three drachms, and this quantity to be (in stimulant effect) the equivalent of half a glass of whiskey, we arrive at the result that three gallons of ether supply the place of ten gallons of whiskey, at 15 deg. under proof, pay duty to the amount of £4 5s., while the ether pays nothing. It is very difficult to arrive at any accurate idea of the extent to which ether is consumed in the North of Ireland. Omagh is said to take about 400 Winchester quarts (equal to 250 gallons yearly), and one Dublin manufacturer has sent to Belfast 4,000 gallons yearly. Now if, for the sake of illustration, this latter quantity be taken as the total consumption of the North, the Excise suffers by the practice to the extent of £5,666 per annum. These figures, must, however, fall immeasurably short of representing the total consumption. The Excise authorities have, I understand, attempted to interfere, but, of course, without success, as there is no present legal restriction affecting the sale of ether, whether pure or methylated.”

That ether-drinking can injure the revenue seems plain enough; a more important question is, will it injure the people more than alcoholic drinks do? As far as the physiological action of ether is known, it does not appear that ether can inflict more injury than alcohol. Ether and alcohol are both artificial productions and narcotic poisons. Alcohol is produced by the fermentation of sugar, and in preparing alcohol there is great waste of nutritious matter, 48 per cent. of the sugar being converted into carbonic acid. Alcohol is composed of  $C_2H_6O$ . By mixing acids with it and distilling, various ethers may be produced. The ether which is used in medicine and which has been used as an intoxicating drink is *sulphuric ether*. This ether is formed by mixing sulphuric acid with rectified spirit of wine, and distilling

and rectifying. It is a colourless volatile liquid, composed of  $C_4H_{10}O$ . It is highly combustible, and, burnt in atmospheric air, it forms carbonic acid and water. It is sparingly soluble in water, but alcohol dissolves it in all proportions. It is used for medical purposes and in analytical chemistry. It has also in some instances been used as an intoxicant, and now we learn that it is employed in Ireland as an intoxicating drink. According to Dr. Pereira, ether, like alcohol, acts as a powerful and rapid poison to plants. The action of ether upon man is very much like that of alcohol. Before the discovery of the action of ether as an anæsthetic, we have seen a little placed in a bladder, and when inhaled producing effects similar to those caused by laughing gas. When ether is swallowed it is immediately absorbed into the blood, and its effects are quickly produced, but they are more transient than those caused by alcohol, as the ether is much more quickly thrown off by the lungs. The problem as to whether the whole of it is expelled in an unchanged condition has not yet been finally settled. In this respect it is the same as with alcohol; it is known that alcohol passes into the blood without undergoing decomposition, that it is carried to the various organs of the body, and that it escapes unchanged at all the outlets of the system. But as the chemists who have experimented on the subject have not succeeded in obtaining the whole of the alcohol which has been taken, it has been assumed that a part of it has been oxidised in the body. Whether this is true or not, it is certain that neither ether nor alcohol can properly be regarded as food. Their proper designation is—narcotic poisons, and though they may be of service in medicine or in the arts, their common use as drinks is an unmixed evil. As so many kinds of intoxicating drinks were used in Ireland, it is a curious question what could have led to ether drinking. Mr. Draper says:—

“So far as I can learn, the introduction of the practice dates from about five years since, and it is curious in its very origin. While it is only right to say that one of my correspondents attributes it to habit acquired by the medicinal use of the drug in cases where alcoholic stimulants were contra-indicated, and another to the desire of ‘getting drunk more cheaply,’ I have not found either of these theories to bear examination, and my authorities are, with these two exceptions, unanimous in the opinion that ether-drinking is a consequence of the laudable efforts made by the Roman Catholic clergy in inducing their flocks to abstain from whiskey. The consumers of ether are said to be nearly all Catholics, and to belong chiefly to the class of small farmers, though the habit certainly prevails among mill-hands and other operatives.”

We are not disposed to believe that ether-drinking has been caused by laudable efforts to prevent whiskey-drinking. We have heard the use of opium in England ascribed to teetotalism, but we have never met with a single instance of a man giving up alcohol and taking opium as a substitute. In fact, as far

as our experience has extended, we have found that the consumers of opium have also been drinkers of alcoholic liquors. Whatever else may have led to ether-drinking, we feel sure it has not been owing to the efforts made to promote teetotalism.

But supposing the practice of ether-drinking to gain ground, and ether intoxication to take the place of alcoholic intoxication, will the change make things much worse than they are at present? If we look at the results of alcohol-drinking as we see them in the hospital, the prison, the workhouse, the lunatic asylum, and in the dwellings of the poor, we think it is scarcely possible to add to the evils thus produced. As to the physiological effects of ether, Mr. Draper says:—

“I have not been able to learn that, apart from the moral ill effects common to all excitants and intoxicants, the habitual use of ether brings in its train any peculiar evils; and although it would be wrong to draw a conclusion from completely negative evidence, I am disposed to believe that the votaries of ether incur less danger from the habit than ordinary dram-drinkers.”

It may be thought that, as ether is more rapid and powerful as an intoxicant than alcohol, it is therefore more dangerous; but as a set-off against its power of speedily producing intoxication, there is the fact, that it is more rapidly expelled from the body. We should, however, be sorry to find an increase of ether-drinking, not because it is worse than drinking alcoholic liquors, but because ether, as well as alcohol, can intoxicate. And as we believe intoxication to be opposed to the physical and moral well-being of our fellow-men, we advocate abstinence from ether, chloroform, opium, alcoholic drinks, and all other things which rob men of their reason. We may be told that there are some alcoholic liquors that are so weak that it is not fair to class them all together, irrespective of their power to intoxicate—that beer is not so bad as gin, nor claret as port, nor any of them so bad as ether. At first sight this seems very plausible, but when we come to trace the history of the slaves of intemperance, we find that they generally began their drinking career with the weak, or, as some persons would call them, innocent drinks; and that the weak drinks prepared the way for the use of the stronger, and the moderate use created the appetite for alcohol which has led to intemperance. There is another point to be noticed, namely, that in drinking it is common to take larger quantities of the drinks containing little alcohol than of those which are more potent, thus attempting to make the increased quantity compensate for the want of strength. The man who drinks spirits uses a small glass and takes small doses; the man who drinks beer uses a larger vessel and drinks a greater quantity. For want of attention to this fact, it has been supposed that the introduction of light wines into this country would supersede the use of stronger

drinks. But men take narcotics for the sake of the effects they produce upon the nerves, and if the drinks are too weak to affect the nerves to the desired extent, a larger quantity will be taken than is required when the drinks are strong. Alcohol, ether, and all other brain poisons, are alike unnecessary, and it is difficult to say which is the worst. If we wish to remove intemperance from our country, we must endeavour, by precept and example, to teach the people to abstain from everything that can intoxicate.



## STIMULANTS IN OLD AGE.

AN opinion prevails in the medical profession, as well as among non-professional persons, that in old age some kind of alcoholic liquor is specially necessary. It is admitted that in youth, when all the powers of the body are in a vigorous condition, men are better without alcoholic liquor; but it is said that when age is coming on, when the lamp of life begins to burn dimly, then some artificial stimulant is required. This notion has come down to us from the times when little was known of physiology, and less of chemistry, and when the great experiment of living without the aid of alcoholic drink had not been tried as it has been in our time by all classes of society. The belief in the usefulness of alcohol in old age is founded upon mistakes respecting the requirements of old persons and the physiological action of alcohol. We are certain that old teetotalers would laugh at the idea, that after they have lived thirty or forty, or fifty years without alcohol, it has become necessary for them to take it. But the majority of the people do not practice abstinence, and are unacquainted with its adaptation to all periods of life. The majority of the inhabitants of this country have, by the use of alcohol made themselves feel a sort of necessity for some kind of narcotic stimulant, and in old age the desire for the stimulant will, in some cases, be felt more keenly than in earlier years. Dr. Trotter, in his treatise on Drunkenness, says: "No man in health can need wine till he arrives at forty. He may then begin with two glasses in the day; at fifty he may add two more, and at sixty he may go the length of six glasses per diem, but not to exceed that quantity even though he should live to an hundred." Dr. Trotter says he prescribes this quantity only to the abstemious man who has never indulged in wine. Now what are the reasons for this use of wine? Why, it is assumed that the stimulus of wine is favourable to the extension of life in aged persons, and this assumption is the only foundation for the belief in the neces-

sity for alcohol in old age. It is a belief without any better evidence in its favour than the opinions of persons who take wine, and are under its influence. The experience of all persons, whether in the medical profession or out of it, who live without alcohol, teaches that men at all ages are better without the use of narcotics, or the so-called stimulants.

The *Practitioner* for December last contained an article by Dr. Anstie on "Ether as a Stimulant-Sedative." It appears that Sir Frederick Pollock, late Chief Baron of the Exchequer, who has now reached the advanced age of eighty-six, and still retains his mental energy and activity, was led about six years ago, by the occurrence of annoying and depressing symptoms, to adopt the inhalation of ether. The quantity he inhales is very small, and though he has followed it up for six years, it has afforded relief without inflicting any apparent injury. There is one thing in this case worthy of notice—the inhalation of the ether has been continued for six years, and it is not likely it will ever be given up. This is the result of the action of all narcotics, or stimulants, as some prefer to call them. When persons begin to take narcotics they soon fancy that they derive benefit from them, and an appetite for them is created. We have no doubt that if the people were to commence inhaling ether, or chloroform, and were to teach their children to inhale a little ether, or chloroform, intoxication with these poisons would become as common as drunkenness from alcohol. Ether shops would multiply, the appetite for ether would grow, writers and speakers would proclaim its virtues, texts of Scripture would be wrested in its favour, it would be called a good creature of God, and it would blight and wither, and destroy the hopes and happiness of the people in the same way that alcoholic drinks do. All narcotic stimulants are dangerous. Are any of them necessary? They are certainly not necessary as articles of diet. If they have any legitimate use it must be as medicines, and, like other poisons, they ought to be used with the greatest care and discrimination. Dr. Anstie considers that old people suffer from nervous affections, which render some kind of narcotic necessary. He says:—

"It seems to us that for these troubles, which are so often spoken of as inevitable, the aged have a right to ask for relief, and, what is more important, they are pretty sure to attempt to get it. By coarse-fibred or uneducated persons more especially the relief may be sought in alcohol; and under the idea that one cannot have too much of a good thing, the sufferer may contract habits of sottish excess."

It is a deplorable sight to see persons of advanced age, on the verge of the grave, using alcoholic drink and living in a state of semi-narcosis. Dr. Anstie seems convinced that some narcotic is required in old age, and he discusses the relative merits of

tobacco, opium and alcohol. Our opinion, however, based upon long personal experience and extensive observation of all classes, is—that the aged, as well as all others, may enjoy better health by the judicious use of natural stimulants than by the employment of any narcotic poisons. We have used the term aged without attempting to define when a person can properly be called aged. Everything depends upon constitution and conduct. Some come into this world with feeble constitutions, and others have to bear the consequences of the sins of their forefathers, whilst many have ruined their health and laid up for themselves a store of maladies through their own misconduct. We see every day the consequences of the violation of the laws of health. One of the effects of intemperance, for instance, is premature old age. Some men are older in constitution through their intemperate drinking at fifty than temperate persons are at seventy. Dr. Trotter gives the following description of the premature old age of the intemperate:—

“ The wrinkled and dejected visage, the bloated and sallow countenance, the dim eye, the quivering lip, the faltering tongue, the trembling hand, the tottering gait, are so many signs of bodily infirmity; while weak judgment, timidity, irresolution, low spirits, trifling disposition, and puerile amusements, discover a mind poisoned by the bowl of excess, not broke by the hand of time.”

If there are any aged persons who really appear to require narcotic stimulants, it must be those who have brought on premature old age by their evil practices. But there is not the slightest ground for the opinion that alcoholic liquors are necessary in *natural* old age. In all parts of this country we may see aged teetotalers living examples of abstinence, and demonstrative evidence of the soundness of our opinion, that at all ages men are better without alcoholic liquors than with them. Our advice to the young is, never begin to take wine or other intoxicating drink, and when you come to be as old as we are, you will feel that health of body and mind, in age as well as in youth, does not depend upon strong drink. Of course old people have their peculiar ailments and troubles; temperance is not a universal panacea, but, all other things being equal, the abstainers from strong drink have less sickness; when ill they get well sooner, and they live longer than persons in the same circumstances who use alcoholic liquors. These opinions may look very startling to persons who use alcoholic stimulants, and who think they derive benefit from them. An investigation, however, into the action of alcoholic stimulants, combined with abstinence from them for a sufficient length of time to get free from their influence, would convince these persons that our statements rest upon the solid foundation of truth.

**Miscellaneous Communications.**

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**PHYSIOLOGICAL RESEARCH ON ALCOHOLS.**

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

GENTLEMEN,—I ask your attention in the present lecture to some experimental demonstrations bearing upon the physiological action of the alcohols. No subject could possibly be of deeper interest to us as Practitioners of Medicine, for one at least of the series of chemical bodies with which we are about to deal, common or ethylic alcohol, is brought daily under our consideration as a remedial agent, and the questions we are about to put are—What is the value of this agent, what its immediate action on the economy? These questions are essentially preliminary to practical application, and I shall treat them in that light — treat them purely and simply for the moment as though we had no practical ideas at all relative to application.

At once let me direct your minds to the precise title of this lecture. It is not upon alcohol, but upon “alcohols.” The Profession up to the present time has been content to study alcohol as though it were an isolated compound, and, indeed, until our days the chemists studied it after a similar mode. But the chemists were first to move onwards, and to discover and teach the facts that there are several bodies in nature all of which are

alcohols, and that the alcohol we use in daily life, in wine, spirits, beer, is but one representative of a large and active family of chemical bodies. I believe I am the first physiologist who has followed the chemists by endeavouring to discover the difference of action of the different members of this family; and as to-day I am still following the same course, the term the “alcohols” is chosen as the most significant heading to the present effort. I have in no degree, it is true, come up with the chemists in their work, but I have kept in the track they have laid out, and for a few stages have done the best, in my way, to make progress.

**PHYSICAL NOTES.**

Common alcohol, or, in more correct language, ethylic alcohol, is a compound of the elements carbon, hydrogen, and oxygen. It is composed of carbon, hydrogen, and oxygen—thus  $C_2H_6O$ . It is made, as is well known, by the fermentation of sugar and after-distillation. Its physical properties are given in the second line of the following table. It is grouped in the table in its natural place with five other alcohols which I have studied in relation to their physiological properties.

**ALCOHOLS.**

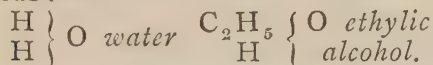
Name.	Chemical composition.	Vapour density. ( $H_2 = 1$ ).	Sp. grav. (water 100).	Boiling point. Centigrade.	Fahrenheit.
Methylic alcohol .	$C H_4 O$	16	·814	60°	140°
Ethylic            ,,	$C_2 H_6 O$	23	·792	78°	172°
Propylic         ,,	$C_3 H_8 O$	30	—	96°	205°
Butylic          ,,	$C_4 H_{10} O$	37	·803	110°	230°
Amylic          ,,	$C_5 H_{12} O$	44	·811	132°	270°
Caprylic        ,,	$C_6 H_{14} O$	51	·821	150°	302°

The construction of ethylic alcohol in a chemical point of view—in respect, that is to say, to the arrange-

ment of its elements—is water ( $H_2O$ ) in which an organic radical called ethyle, composed of carbon and hy-

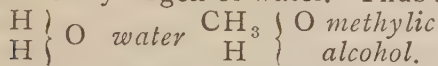
drogen ( $C_2H_5$ ), replaces one atom of the hydrogen of the water.

Thus:—



When ethylic alcohol is oxidised, it yields different compounds, according to the character of the oxidation. The result may be a simple oxidation of two atoms of the hydrogen, by which water is produced, and there is left with the water a fluid having the composition of  $C_2H_4O$ , called aldehyde; or, the oxidation carried further, an equivalent of oxygen is added, with the result of the formation of a compound  $C_2H_4O_2$ , acetic acid. Lastly, if the oxidation be intense, as it is in this lamp, where we are burning alcohol, the carbon, which in preceding changes remains untouched, is directly oxidised, as well as the hydrogen, and the result is the production of dioxide of carbon or carbonic acid  $CO_2$ , and water  $H_2O$ .

Ethylic alcohol, studied in this simple manner, is, then, to us a type of other bodies, five of which are down in our table. In the destructive distillation of wood, there passes over an alcohol which is commonly called wood spirit or naphtha. We have a very pure specimen of it now going round the room. This alcohol differs from common alcohol in that it is a compound in which an organic radical called methyle,  $CH_3$ , replaces one atom of hydrogen of water. Thus:—



This alcohol is called methylic alcohol; its composition is, as seen above,  $CH_4O$ , and its physical properties are placed in the table. When this alcohol is slowly oxidised, it yields, as we now know from the recent discovery of the illustrious chemist, Hoffmann, an aldehyde called formaldehyde. In the production of this compound, two atoms of the hydrogen of the methylic alcohol are oxidised, forming one equivalent of water,  $H_2O$ , and formaldehyde,  $CH_2O$ , a gas. If the oxidation be carried further still, an equivalent of oxygen is added, and the result is the formation of an acid called formic.

$CH_2O_2$ , which is the analogue of acetic acid.

When methylic alcohol is oxidised rapidly, as in this burning lamp, which is trimmed with it, the carbon and oxygen are both oxidised, and the products are dioxide of carbon or carbonic acid,  $CO_2$ , and water,  $H_2O$ . This alcohol, please observe, has in it only one equivalent of carbon.

In the fermentation of potato flour, and, in less quantity, in all alcoholic fermentations, we obtain a crude disagreeably smelling spirit which is called fusel oil. Dr. Versmann has been good enough to bring us a specimen of this, and you will see that indeed it does at first sight look like an oil. It is of the colour of linseed oil, and the odour is intolerable. By successive distillations, however, at different degrees of temperature, we can succeed in distilling over from this unpromising liquor several varieties of alcohols. I will pass round four of these which have been distilled by Dr. Versmann. They are the four alcohols named in the table after common or ethylic alcohol, and they are called respectively propylic, butylic, amylic, and caproylic. In all of them we have the same plan of construction as in common alcohol—that is to say, we have one atom of the hydrogen of water,  $H_2O$  replaced by an organic radical. In propylic alcohol this radical is propyle ( $C_3H_7$ ) in butylic alcohol, butyle ( $C_4H_9$ ); in amylic alcohol, amyle ( $C_5H_{11}$ ); and in caproylic alcohol, caproyle ( $C_6H_{13}$ ). The change in each case is the same as in the case of ethylic alcohol. By oxidation of these alcohols we obtain in a similar manner corresponding aldehydes and acids. Thus propylic alcohol gives propionaldehyde  $C_3H_6O$  and propionic acid  $C_3H_6O_2$ . Butylic alcohol gives butylaldehyde  $C_4H_8O$  and butylic acid  $C_4H_8O_2$ . Amylic alcohol gives amylaldehyde or commonly called valeraldehyde  $C_5H_{10}O$  and valerianic acid  $C_5H_{10}O_2$ . Caproylic should also give an aldehyde  $C_6H_{12}O$ , and an acid, caproic  $C_6H_{12}O_2$ ; but these have not yet been directly obtained from the alcohols.

When the heavier alcohols are burned as we have them burning in these lamps, which are trimmed with them separately, we get, as from common alcohol, oxidation of carbon and hydrogen, and as products of such oxidation the dioxide of carbon or carbonic acid ( $\text{CO}_2$ ) and water ( $\text{H}_2\text{O}$ ). But there is a difference in the process of burning, for now the oxygen in the common air is not sufficient to consume all the carbon, and the result is an escape or separation of free carbon, which becomes deposited as soot. See this in experiment. Before me are six lamps trimmed with the six alcohols, and all yielding flame. I commence to test the flame for free carbon by holding over each a cold white porcelain plate. Methylic alcohol and ethylic yield no deposit of soot on the plate, their carbon is all oxidised; propylic alcohol gives a faint deposit, butylic more, amylic more still, while the caproylic, so soon as I bring the plate near to its flame, yields a deposit which gives a layer of carbon.

Bearing in mind this increase of carbon in each of the alcohols from the methylic, please to carry the eye to the table in which the physical characteristics of each are explained, you will then see that, in proportion as the carbon and hydrogen increase, there is produced in each case a fluid having (with one apparent exception) a proportionate heavier vapour density, a heavier fluid density, and a higher boiling point. These differences, as I shall prove, modify physiological action.

One more peculiarity requires to be noticed, and this, physiologically, is of great moment. Methylic and ethylic alcohols are soluble in water in all proportions; but when we move to the higher alcohols, this solubility is lessened. Butylic alcohol, for example, is soluble in water in the proportion of one part to one and a-half, while amylic and caproylic are insoluble.

#### PHYSIOLOGICAL ACTION.

In considering physiological action, I shall commence with common or

ethylic alcohol, and I shall dwell on modes of administration; stages or degrees and characters of symptoms produced by alcohols; effects on animal temperature; mode of death, and post-mortem results in cases where death is a direct result. Changes of structure from the slow action of alcohol I must reserve for a future lecture.

#### ETHYLIC ALCOHOL.

*Administration.*—Ethylic alcohol can be administered in different ways—by the mouth, by subcutaneous injection, by inhalation of vapour, and by inhalation in the form of spray. For the latter, or spray inhalation, I employ the Seigle's spray producer, made by Krohne and Sesemann, in which a current of steam is driven by the heat of a spirit-lamp from a small boiler, and the alcohol drawn up the capillary tube from its reservoir is broken up into very fine spray. This little instrument is invaluable in all cases where inhalation of spray is required. Rapidity of action is most quickly secured by the method of subcutaneous injection, but this sometimes causes local irritation, and on that account is so far objectionable. To meet the objection it is an advantage to dilute absolute alcohol with an equal quantity of water. Intoxication by inhalation of the vapour is a very slow process, even at a temperature of  $80^\circ$  Fahr.

*Stages of Intoxication.*—In the progress towards complete intoxication under ethylic alcohol, however administered, there are, as under chloroform, four distinct degrees or stages. The first is a stage of simple exhilaration; the second of excitement; the third of rambling insensibility; and the fourth of entire unconsciousness, with muscular prostration. The duration of these stages can be modified in the most remarkable degree by the mode of administration, but, whether they are developed and recovered from in an hour or a day, they are always present except in cases where the quantity of alcohol administered is in such excess that life is endangered or destroyed instantly.

*Temperature.*—In the first or exhilarative stage, the temperature undergoes a slight increase—in birds a degree Fahrenheit, in rabbits half a degree. With the stage of excitement, during which there is vomiting in birds, or attempts at vomiting, the temperature comes back to its natural standard, in the second stage it soon begins to fall, and during the third into the fourth stage the decline continues. In the third degree it reaches its first minimum, and in birds comes down from five and a half to six degrees; in rabbits from two and a half to three degrees. In this condition the animal temperature often remains steady until there are signs of recovery—viz. conscious or semi-conscious movements, upon which there is a further fall of temperature of two or even three degrees. In this course of recovery I have seen, for instance, the temperature of a pigeon which had a natural standard of  $110^{\circ}$ , reduced to  $102^{\circ}$ . Usually with this depression of force there is desire for sleep, and with perfect rest in a warm air there is return of animal heat; but the return is very slow, the space of time required to bring back the natural heat being from three to four times longer than that which was required to reduce to the minimum.

In these fluctuations of temperature, the ordinary influences of the external air play an important part as regards duration of fluctuations, and, to some extent, as regards extremes of fluctuation.

The introduction of alcohol into the body in frequent and small quantities, so as not to produce any of the stages of true intoxication, is attended with a reduction of temperature limited to one and a half degrees in small mammalia. The effect is definite as the result of the administration, and occurs, under varying circumstances, before food, after food, and in atmospheres of different warmth. It is most defined when the alcohol is administered by the hypodermic method.

When the alcoholic sleep from ethyl alcohol is pushed to the fullest extent, a very long time elapses, after

perfect unconsciousness is developed, before the respiratory, circulatory, and even some of the voluntary muscles cease to act. The movement of the voluntary muscles is not, however, an act of consciousness; it is not reflex, and it cannot be excited by the touch. It is usually an automatic movement, and will continue in the limbs for a long time. At last nothing remains to give evidence of the continuance of life except the motion of the heart and diaphragm, the persistency of the action of which is amongst the most curious facts in physiology. The final act rests with the heart: the heart continues to contract when the breathing has ceased, and is found contracting on the right side in both auricles and ventricles, on opening the body, when all the outward indications of motion are over.

I notice particularly that prolonged tremors do not seem to be produced by the ethylic alcohol.

*Post-mortem Appearances.*—The appearances immediately after death from ethylic alcoholic intoxication are very distinctive. The brain is found charged with fluid blood, and the sinuses distended with exudation of serum in the ventricles and in the membranes. The small vessels of the brain are greatly injected; the lungs are white, free from congestion, and well inflated with air; the heart is full of blood on both sides, and its own vessels are engorged; the liver is natural, and the gall-bladder is not distended; the inner surface of the stomach, even when the intoxication is induced by the gradual inhalation of the vapour, is very much congested, and a strong odour of the alcohol pervades any contents that may be in the stomach; the spleen is normal, and the alimentary tract below the stomach is normal; the kidneys are intensely congested, blood exuding freely from the cortical part in points or specks; the bladder is usually empty. The blood on the left as well as on the right side of the heart is dark, but on exposure to air it soon reddens, and coagulation is firm. The corpuscles undergo great changes

even before death: they are shrunken, crenate, and some are elongated and flattened, with truncated ends.

#### METHYLIC ALCOHOL.

Methylic alcohol, placed in our table in its proper place, above ethylic, may be administered in the same manner as ethylic, but it is much more easily administered by inhalation. It might be used as a general anæsthetic in the place of chloroform—I mean by inhalation—but it is slower in its action.

Carried to the full extent, the methylic alcohol produces four distinct stages or degrees, the respiration in the third degree becoming blowing in character. With the fourth degree there is complete muscular prostration and anæsthesia, but reflex movements may be excited, unless the period of death be very near. The temperature of the animal body begins rapidly to fall under the influence of methylic alcohol, and often falls from the first without any preliminary rise.

In birds (pigeons) I have found, when the third degree of insensibility is produced, that, in so short a period as ten minutes, the temperature is reduced four degrees, and that the decline of temperature continues during the whole period of recovery. reaching, at the lowest, a decline of eight degrees on Fahrenheit's scale. The temperature begins to rise again about two hours after the first indications of recovery, but a period of from seven to eight hours is required to restore the body, under the most favourable conditions, to the natural temperature. In one case these effects of reduction of temperature were observed, even when the external temperature of the air was 80° Fahr.

When the administration of methylic alcohol is carried to the extent of destroying life, the respiration and circulation cease almost at the same time; but here again the heart slightly outlives the respiration. And if a frog, which seems to have been killed outright by this substance, be examined microscopally after death, the circulation through the web of the foot may be observed for more than an hour.

On opening the body of an animal that has been destroyed by methylic alcohol, the heart will be found pulsating several minutes after death; the heart contains blood on both sides, and the lungs are charged with a little blood, so that they are of a pink colour. The brain is much gorged with blood, and the kidneys are congested. The blood itself undergoes little change; coagulation is slightly impeded, but a firm clot results, and the blood corpuscles retain their natural character. In respect to post-mortem appearances, there is thus a difference between the two alcohols in respect to the condition of the lung. Dr. Sedgwick has this moment brought into the room a careful dissection of an animal, a rabbit, which has slept into death from the effect of an overdose of common alcohol. The dose in this case which has produced the fatal insensibility is two hundred and fifty grains administered at five injections by the hypodermic syringe. You will see that both sides of the heart are in vigorous action, but the lungs are absolutely bloodless; they are pure white in appearance. Had the death been from methylic alcohol, the colour would have been pink, because there would have been some blood still entering from the heart. Hence, methylic alcohol is less fatal than ethylic. The circulating and respiratory systems fail more evenly together.

#### THE HEAVIER ALCOHOLS.

We come now to consider the action of the heavier alcohols, those which in the table are placed naturally below the standard specimen, ethylic alcohol. We will pass over the propylic alcohol, because there is some difficulty in obtaining so perfect a specimen as would be absolutely reliable, and we will advance to butylic, amylic, and caproylic. So soon as we arrive at these alcohols, we have an important physical difference to consider as between them and the ethylic and methylic. The difference I refer to is that they are not, like the lighter alcohols, soluble in water. Notwithstanding, they enter the body in sufficient quantity to produce the most

decisive effects. Each of the alcohols named may be administered by inhalation, by spray, by subcutaneous injection, or by the alimentary canal; the first methods are prolonged, the best is that by subcutaneous injection. These heavier alcohols, if they be administered slowly, produce also four degrees of symptoms; but the degrees or stages are much less clearly defined. The first and second degrees are comparatively brief; the third and fourth prolonged; but the parallel remains. They act in much smaller doses, moreover, as an illustration before us will show. Here are two guinea pigs—one large, the other small—the larger one being, within forty grains, twice the weight of the smaller. Two hours ago to the smaller was administered subcutaneously fifteen grains of pure ethylic, to the larger, at the same moment and subcutaneously, fifteen grains of pure amylic alcohol. See the difference: the small animal is unaffected; it was drowsy for twenty minutes or so, but now it is quite well; but the larger animal under the amylic alcohol, in what profound and senseless sleep it lies! It is as deeply narcotised and cataleptic as it would be under the same dose of hydrate of chloral, and this state will last for eight or, it may be, ten hours, with ultimate perfect recovery. At the commencement of my last lecture, I showed a similar result from butylic alcohol. Now in these cases an overwhelming dose of the narcotic alcohol has been given at once, and the symptoms have passed to the fourth stage or degree quickly. But if the dose be smaller, there will be a prolonged third stage, during which there are certain symptoms which do not belong to the intoxication produced by the lighter alcohols. One of these symptoms is a peculiar muscular tremor which occurs at intervals in a spontaneous manner, but which can be excited by a touch at any time. In the intervals when the tremors are absent, there is frequent twitching of muscles. The tremors themselves are not positively muscular contractions, but rather vibra-

tions through the whole muscular system, and are connected with extreme want of true contractile power. While they are present the temperature continues to decline, and a difference of a full half-degree may be observed between, before, and after each paroxysm. When they are once established, they may continue, without further administration of alcohol, for ten and twelve hours steadily; and so slowly do they decline, that I have seen them excited thirty-six hours after the deep intoxication. They subside by remission of intensity, and prolongation of interval of occurrence.

There cannot, I think, be a doubt that these tremors produced in animals by the heavier alcohols, are identical with the tremors observed in the human subject during the alcoholic disease known as delirium tremens. What the nature of the muscular movement is, what unnatural relationships exist between the nervous system, the muscles, and the blood—these are questions of singular interest. Involuntary, developed even against the will; excited by any external touch that sets up vibration; attended with great reduction of temperature, and remaining so long as the temperature is low, they indicate clearly an intense depression of animal force, a condition in which all the force that remains seems to be expended on the organic acts of life, on the support of the motions of the heart, muscles of respiration, and the functions of the discerning glands.

While these symptoms of deep narcotism and muscular prostration are present as the result of the administration of the heavier alcohols, the most important modifications of animal temperature are also presented. From the first there is a fall of temperature which continues up to the fourth degree of insensibility. The extreme of reduction of temperature requires to be seen to be fully accepted. Well, here is the fact now before us. The guinea-pig on the table, which is in such a deep and death-like sleep, had a natural tem-

perature of  $103^{\circ}$  Fahr. before the alcohol was injected. Read now the temperature for yourselves; it is  $80^{\circ}$  Fahr., so that an animal can actually live when it has lost  $23^{\circ}$  of natural heat. In cholera in the human subject I once saw the temperature fall to  $84^{\circ}$  Fahr., which would be  $14^{\circ}$  below the natural condition; but here the fall is  $23^{\circ}$ , and yet with care the animal will recover without any more anxiety than if it were waking from natural sleep. When, to the inexperienced, death would seem inevitable, when the respirations are not more than one per minute, recovery may be quite safe, and when it is pronounced and consciousness returns, eagerness for food is the only observable peculiarity. I could repeat this experiment with butylic alcohol, but to produce the same extreme effects, I should require to employ about one-fifth more of the fluid; and I could repeat the experiment with the caproyclic alcohol, but to produce the same effect I need not take so much of the fluid by one-fifth.

In these experiments we see the influence of chemical composition. We see that as the weight of the alcohol increases, as the carbon and hydrogen, but especially the carbon, increases, the narcotic action of the agent is increased. No phenomena can be steadier than these phenomena.

When an animal is made to sleep into actual death by the administration of the heavier alcohols, the heart is commonly found containing blood on both sides, and the lungs contain a little blood. The blood itself is dark, even in the arterial circuit, and the venous blood is of dirty hue, and so viscid it flows slowly. Coagulation occurs, but the clot is loose, and yields much coloured serum. The blood-corpuscles are shrunken, crenate or elongated with truncated ends, where they lie loose, but they are mostly massed together in rolls, appearing as if they made in each roll one distinct column; the fibrine separates in rods or bands, forming a coarse network very peculiar and distinct in character. The sinuses of

the brain are charged with blood, and the brain, usually white, is suffused with small dark points of blood. The kidneys are congested. The muscles are dark, contain fluid blood, and for many hours retain the odour of the alcohol; they resist putrefaction for several days. The alimentary canal and other parts of the body present no appearance deserving special notice.

#### REVIEW.

Reviewing the facts thus noticed, we gather into a few heads the more distinctive results of our researches. We learn that there is a certain general character of action pertaining to all the alcohols so far as we have investigated, but that details of action differ according to chemical constitution—that is to say, weight, *cæteris paribus*, intensifies action, and makes it more prolonged. Under all the alcohols, animal temperature falls; under all, when they are administered with sufficient freedom, motion and sensation are paralysed. The order of action on the various parts of the organism is uniform. The first action seems to be on the centres of voluntary motion, next on the centres of consciousness, grey matter of the hemispheres; and next on centres of sensation, or those centres through which sensations are transmitted to the centres of consciousness. When all these parts are under the alcoholic influence, the intoxication is complete; there is all but death.

And yet this extreme intoxication is not near death—is not near death for this reason, that those centres of power on which the movements of the heart and of the respiration depend remain not unaffected, perchance, but so little affected that they are capable of sustaining a minimum life. The animal fire smoulders, but does not go out. In this particular of action lies the safety of common alcohol in respect to its immediate effects. Every profound intoxication would be a fatal catastrophe were not this involuntary power of breathing and of circulating blood specially retained.

You will ask me naturally, before I leave this subject, What is the mode

of action of the alcohols? Do they arrest oxidation, or do they themselves undergo oxidation? Are they slowly burned in the body, yielding the same products of combustion as are yielded by this burning lamp—viz., carbonic acid and water, or are they not burned at all? The evidence on these points is conflicting. On the one side, there is the evidence of Percy, Perrin, Lallemand, and Duroy, which goes to prove that *ethylic* alcohol is laid up in the tissues until it is eliminated by the urinary and other secretions; and again, there are the experiments of Thudichum and Dupré which go to show that, although alcohol will pass off in the free state by the urine when the body is, in plain language, supersaturated with it, yet that the quantity found in the urine, after certain large amounts taken, bears no proportion to the amount that ought to be found if the whole were eliminated in the form in which it is taken, as alcohol. Dr. Thudichum's book in which he discusses this question, his report to the Medical Officer of the Privy Council, which I place before you, is such a model of industry, such a master-book in chemical physiology, that I would it were in the hands of every practitioner in the kingdom, and assuredly the part which refers to alcohol is deserving of special regard. For myself, I am satisfied that his facts are undeniable; but granting this, I am not so certain the inference from them, that alcohol is consumed, is, in every sense of the term, right. Dr. Thudichum himself shows that alcohol does pass off at a certain stage of intoxication by the urine, as alcohol, and we may therefore all agree that such direct elimination is possible. But the whole is not accounted for by the finding; therefore some, a greater part, is consumed: that is the argument. Before, however, we can admit the argument, we must know how much common alcohol the body will hold—as a cask, we may say, would hold it—how much can be laid up and retained in combination with the water of the tissues, and how long a time must elapse before a given quantity of alcohol is

actually removed from the tissues by the kidneys and other emunctories. When we consider the greed with which alcohol drinks water, I fear the element of time for elimination being conceded, but little alcohol would be found lost as so much consumed. My reasoning is based on the phenomena of alcoholic intoxication. I can deduce from them no evidence at any stage of intoxication that there is increase of power in the organism. I admit in the first stage there is what is called excitement, and a slight but brief increase of temperature; but that does not occur to me as being anything more than the result of local excitation, the effect of a local irritant on the extremities of nerve. This stimulation or excitement of sensibility is, I think, a natural sequence of the application of an irritant to structures in which there is a nervous expanse to receive impressions, and with this effect all evidence of stimulation, to say nothing of sustainment of power, ends. So soon as the alcohol makes its way into the organism, and diffusethrough the fluids, so soon there is depression, so soon respiration falls, carbonic acid gas, from respiration, decreases, and muscular strength, consciousness, and sensibility decline.

Above all, against the idea of active combustion of alcohols in the body, is the overwhelming fact of reduction of temperature. Can an animal which is burning faster than it ought to burn grow colder than is natural, without the assistance of evaporation, or other compensatory process?

I am prepared, notwithstanding all this, to admit a certain oxidation of alcohol in the body. When the blood diluted with an alcohol brings round the weak spirit, in constant circuit, to the lungs, to expose it there to the air, it is next to impossible but that the same change would occur as would occur if the same diluted alcohol were exposed to air out of the body, a slow oxidation with an acid as a product. The free acid sweatings which follow a single alcoholic intoxication, the acid secretions from the intestines, the irritable condition of the heart, so

like that which follows the injection of a soluble organic acid, all favour this view.

I have dwelt on these points from their immediate relation to practice. The evidence of the physicians is not less conflicting than the evidence of the physiologists. What shall we believe? Dr. Todd and his followers cure fever with alcohol. Dr. Gairdner, of Glasgow, treats fever with and without alcohol, and finds that he cures without better by far than with it. I will contest on neither side, because I know that, as yet, physicians have never prescribed alcoholic fluids with any precision at all, either in regard to quality or quantity, the common alcoholic drinks being anything; but I am prepared to contest, if, under scientific administration, alcohol be found to cure fever, that the medicine acts by lowering temperature and checking waste, not by sustaining as food sustains the body.

The alcohols are strictly anæsthetics, and, indeed, the first published case of surgical operation under anæsthetic sleep was performed, in 1839, by Dr. Collier on a negro, who was rendered insensible by breathing the fumes of alcohol. But the anæsthesia is not commendable; it is too slow and too prolonged. Methylic alcohol, if it could be entirely purified and made inodorous, might be used, and with methylic ether would it be the safest of agents, but as yet its inhalation is disagreeable.

The difference of action of the alcohols as they follow in their series, and as the carbon increases, is most striking. The slowness of action, the prolongation of action, step by step, from the lighter to the heavier compounds, is a fact as definite as any in physiology. Still more curious is it that neither the methylic nor the ethylic alcohols produce those tremors in the inferior animals which we recognise and especially name from their occurrence in man, while the butylic and the amylic most effectively call them forth. Considering how much of the heavier kind of alcohol is distributed for consumption, especially amongst the lower orders,

I think it is possible that the heavier fluids may be the cause of delirium tremens in the human subject, as they probably are the cause of that continued coldness, lassitude, and depression which follow the well-known dinner with "bad wine."

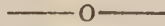
Speaking honestly, I cannot by the argument yet presented to me, admit the alcohols through any gate that might distinguish them as apart from other chemical bodies. I can no more accept them as food than I can chloroform, or ether, or methylal. That they produce a temporary excitement is true, but as their general action is quickly to reduce animal heat, I cannot see how they can supply animal force. I see clearly how they reduce animal power, and can show a reason for using them in order to stop physical pain, or to stupefy mental pain; but that they give strength—*i.e.* that they supply material for construction of fine tissue, or throw force into tissues supplied by other material—must be an error as solemn as it is wide-spread.

The true character of the alcohols is that they are agreeable temporary shrouds. The savage, with the mansions of his soul unfurnished, buries his restless energy under their shadow. The civilised man, overburdened with mental labour or with engrossing care, seeks the same shade; but it is a shade after all in which, in exact proportion as he seeks it, the seeker retires from perfect natural life. To resort for force to alcohol is, to my mind, equivalent to the act of searching for the sun in subterranean gloom, until all is night.

As yet alcohol, the most commonly summoned of accredited remedies, has never been properly tested to meet human diseases. I mean by this that it has never been tested as alcohol of a given chemical composition, of a given purity, and in given measures. Wines, beers, and spirits are anything—compounds of alcohols and compounds of alcohols with ethers and other foreign substances. It is time, therefore, now for the learned to be precise respecting alcohol, and for the learned to learn the positive mean-

ing of one of their most potent instruments for good or for evil, whereupon I think they will place the alcohol series in the position I have placed it, even though their prejudices

in regard to it are, as mine are, by moderate habit, but confessed inconsistency, in its favour.—*Medical Times and Gazette*, Dec. 18 1869.



## DIGESTION.

(From the "Englishwoman's Domestic Magazine.")

ONCE, and only once, in the lifetime of man, an intelligent human eye has been able to look into the living stomach and watch the process of digestion. In 1822, at the United States military post of Michilimackinac, Alexis St. Martin, a Canadian of French extraction, received accidentally a heavy charge of duck-shot in his side, while he was standing one yard from the muzzle of the gun. The wound was frightful. One of the lungs protruded, and from an enormous aperture in the stomach the food recently eaten was oozing. Dr. William Beaumont, U.S.A., the surgeon of the post, was notified, and dressed the wound. In exactly one year from that day the young man was well enough to get out of doors and walk about the fort, and he continued to improve in health and strength until he was as strong and hardy as most of his race. He married, became the father of a large family, and performed for many years the laborious duties appertaining to an officer's servant at a frontier post. But the aperture into the stomach never closed, and the patient would not submit to the painful operation by which such wounds are closed artificially. He wore a compress arranged by the doctor, without which his dinner was not safe after he had taken it.

By a most blessed chance it happened that this Dr. William Beaumont, stationed there on the outskirts of creation, was an intelligent inquisitive human being, who perceived all the value of the opportunity afforded by this unique event. He set about improving that opportunity.

He took the young man into his service, and at intervals, for eight years, he experimented upon him. He alone amongst the sons of men had seen liquid flowing into the stomach of a living person while yet the vessel was at the drinker's lips. Through the aperture (which remained two and a half inches in circumference) he could watch the entire operation of digestion, and he did so hundreds of times. If the man's stomach ached, he could look into it and see what was the matter, and, having found out, he would drop a rectifying pill into the aperture. He ascertained the time it takes to digest each of the articles of food commonly eaten, and the effects of all the usual errors in eating and drinking.

In 1833 he published a thin volume, at Plattsburg, on Lake Champlain, in which the results of thousands of experiments and observations were only too briefly stated. He appears not to have heard of teetotalism, and hence all that he says upon the effects of alcoholic liquors is free from the suspicion which the arrogance and extravagance of some teetotalers have thrown over much that has been published on this subject. With a mind unbiassed, Dr. Beaumont, peering into the stomach of this stout Canadian, notices that a glass of brandy causes the coats of that organ to assume the same inflamed appearance as when he had been angry or frightened, or had over-eaten, or had had the flow of perspiration suddenly checked. In other words, brandy played the part of a *foe* in his system, not that of a friend; it produced effects which were morbid, not healthy. Nor

did it make any material difference whether St. Martin drank brandy, whiskey, wine, cider, or beer, except so far as one was stronger than the other. "Simple water," says Dr. Beaumont, "is perhaps the only fluid that is called for by the wants of the economy. The artificial drinks are probably *all* more or less injurious; some more so than others, but none can claim exemption from the general charge. Even tea and coffee, the common beverages of all classes of people, have a tendency to debilitate the digestive organs. . . . The whole class of alcoholic liquors may be considered as narcotics, producing very little difference in their ultimate effects upon the system."

He ascertained too (not guessed, or inferred, but *ascertained*, watch in hand) that such things as mustard, horse-radish, and pepper retard digestion. At the close of his invaluable work Dr. Beaumont appends a long list of "Inferences," among which are the following:—"That solid food of a certain texture is easier of digestion than fluid; that stimulating condiments are injurious to the healthy system; that the use of ardent spirits *always* produces disease of the stomach if persisted in; that water, ardent spirits, and most other fluids, are not affected by the gastric juice, but pass from the stomach soon after they have been received." One thing appears to have much surprised Dr. Beaumont, and that was the degree to which St. Martin's system could be disordered without his being much inconvenienced by it. After drinking hard every day for eight or ten days, the stomach would show alarming appearances of disease, and yet the man would only feel a slight headache, and a general dulness and languor.

If there is no comfort for drinkers in Dr. Beaumont's precious little volume, it must be also confessed that neither the dissecting-knife nor the microscope affords us the least countenance. All that has yet been ascertained of the effects of alcohol by the dissection of the body favours the extreme position of the extreme

teetotalers. A brain alcoholised the microscope proves to be a brain diseased. Blood which has absorbed alcohol is unhealthy blood—the microscope shows it. The liver, the heart, and other organs, which have been accustomed to absorb alcohol, all give testimony under the microscope which produces discomfort in the mind of one who likes a glass of wine, and hopes to be able to continue the enjoyment of it. The dissecting-knife and the microscope so far have nothing to say for us—nothing at all: they are dead against us.

Of all the experiments which have yet been undertaken with a view to trace the course of alcohol through the human system, the most important were those made in Paris a few years ago by Professors Lallemand, Perrin, and Duroy, distinguished physicians and chemists. Frenchmen have a way of co-operating with one another, both in the investigation of scientific questions and the production of literature, which is creditable to their civilisation and beneficial to the world. The experiments conducted by these gentlemen produced the remarkable effect of causing the editor of a leading periodical to confess to the public that he was not infallible. In 1855 the *Westminster Review* contained an article by Mr. Lewes, in which the teetotal side of these questions was effectively ridiculed, but, in 1861, the same periodical reviewed the work of the French professors just named, and honoured itself by appending a note in which it is said—"Since the date of our former article, scientific research has brought to light important facts which necessarily modify the opinions we then expressed concerning the rôle of alcohol in the human body." Those facts were revealed or indicated in the experiments of Messrs. Lallemand, Perrin and Duroy.

Ether and chloroform—their mode of operation; why and how they rendered the living body insensible to pain under the surgeon's knife; what becomes of them after they have performed that office—these were the points which engaged their attention,

and in the investigation of which they spent several years. They were rewarded at length, with the success due to patience and ingenuity. By the aid of ingenious apparatus, after experiments almost numberless, they felt themselves in a position to demonstrate that, when ether is inhaled, it is immediately absorbed by the blood, and by the blood is conveyed to the brain. If a surgeon were to commit such a breach of professional etiquette as to cut off a patient's head at the moment of complete insensibility, he would be able to distil from the brain a great quantity of ether. But it is not usual to take that liberty except with dogs. The inhalation, therefore, proceeds until the surgical operation is finished, when the handkerchief is withdrawn from the patient's face, and he is left to regain his senses. What happens then? What becomes of the ether? These learned Frenchmen discovered that most of it goes out of the body by the road it came in at—the lungs. It was breathed in; it is breathed out. The rest escapes by other channels of egress; it all escapes, and it escapes unchanged! That is the point—it escapes without having *left* anything in the system. All that can be said of it is, that it entered into the body, created morbid conditions in the body, and then left the body. It cost these patient men years to arrive at this result, but any one who has ever had charge of a patient that has been rendered insensible by ether will find little difficulty in believing it.

Having reached this demonstration, the experimenters naturally thought of applying the same method and similar apparatus to the investigation of the effects of alcohol, which is the fluid nearest resembling ether and chloroform. Dogs and men suffered in the cause. In the moisture exhaled from the pores of a drunken dog's skin these cunning Frenchmen detected the alcohol which had made him drunk. They proved it to exist in the breath of a man at six o'clock in the evening who had drunk a bottle of claret for breakfast at half-past ten in the morning. They also proved that at mid-

night the alcohol of that bottle of wine was still availing itself of other avenues of escape. They proved that when alcohol is taken into the system in any of its dilutions—wine, cider, spirits, or beer—the whole animal economy speedily busies itself with its expulsion, and continues to do so until it has expelled it. The lungs exhale it; the pores of the skin let out a little of it, the kidneys do their part, and by whatever other road an enemy can escape it seeks the outer air. Like ether, alcohol enters the body, makes a disturbance there, and goes out of the body, leaving it no richer than it found it. It is a guest that departs, after giving a great deal of trouble, without paying his bill or "remembering" the servants. Now, to make the demonstration complete, it would be necessary to take some unfortunate man or dog, give him a certain quantity of alcohol—say one ounce—and afterwards distil from his breath, perspiration, &c., the whole quantity that he had swallowed. This has not been done; it never will be done; it is obviously impossible. Enough has been done to justify these conscientious and indefatigable inquirers in announcing, as a thing susceptible of all but demonstration, that alcohol contributes to the human system nothing whatever, but leaves it undigested and wholly unchanged. They are fully persuaded (and so will you be, reader, if you read their book) that if you take into your system an ounce of alcohol, the whole ounce leaves the system within forty-eight hours, just as good alcohol as it went in.

There is a boy in "Pickwick" who swallowed a farthing. "Out with it," said the father, and it is to be presumed—though Mr. Weller does not mention the fact—that the boy complied with a request so reasonable. Just as much nutrition as that small copper coin left in the system of that boy—plus a small lump of sugar—did the claret which we drank yesterday deposit in ours—so, at least, we must infer from the experiments of Messrs. Lallemand, Perrin, and Duroy.

## THE DETENTION OF DRUNKARDS.

(From the *Lancet*, March 12.)

THE attempt made by Mr. Dalrymple to obtain from the House of Commons a resolution to the effect that it is desirable to legislate for the proper reception, detention, and management of habitual drunkards is one that will entirely command the sympathies of the medical profession. It was met, of course, by the ordinary ministerial statement that the subject was "difficult"; just as if it were not the proper function and very purpose of a Government to cope with difficulties and to overcome them. The question is one, we trust, in which an increasing public interest will be excited. At present a knowledge of the amount and nature of the evils produced by habitual drunkenness is limited to a few, or to certain classes of persons. The sinners, or sufferers, whichever they should be considered, slink away from the light of the sun, and from the cognizance of good society. They usually alternate between periods of frantic debauch and periods of maudlin penitence, and the former are passed in seclusion more or less complete, or else in some miserable brothel or gin-shop. There can be no doubt that the habitual drunkard is as dangerous an animal to society as the lunatic—that he is quite as likely to inflict bodily injury upon those around him, and quite as likely to squander his property, and bring his family to destitution. Looking at the nature of his acts, and at the results springing from them, it is impossible to deny that the public has a right to hinder him from doing mischief. Mr. Bruce told the House of Commons that the Government measures about beer-shops and about education would greatly tend to diminish the evil complained of. We venture to doubt whether this is so. The habitual drunkard is frequently a man of education, and is seldom dependent upon the beer-shop for his means of indulgence. If Mr. Bruce would like to

make himself acquainted with the class of cases for which legislation is required, and if he would learn facts which would stimulate him to take the field against imaginary difficulties, he should inquire into the histories of the various officers who during the last twenty years have been compelled to leave the naval or military service of the Crown on account of habits of intemperance. It is probable that the authorities of either the Horse Guards or the Admiralty, and it is certain that any old soldier or sailor, could furnish him with instances in which this madness or this vice, has sprung from causes which neither education nor improved beer-shops will remove, and which no minister should be content passively to deplore.

Mr. Dalrymple has expressed his intention to bring in a Bill upon the subject. Whenever he does so, he will be met by the objection that habitual drunkenness cannot be defined, and that a power to restrain drunkards might be abroad for evil ends. We think this objection might be met by making drunkenness in the first place, and then habitual drunkenness, offences of which the criminal law should take prompt cognisance. At present, intoxication is regarded by the administrators of the law as a venial error; and is punished, if at all, by the infliction of a trifling fine. Now, if it were enacted that any second summary conviction for drunkenness before a magistrate should be followed by a short term of imprisonment with hard labour; and if the police were instructed to prosecute offenders, a great step would at once be gained. The fact of drunkenness would be branded as criminal and disgraceful in a way that has never yet been done, and the punishment would have a powerful deterrent effect upon many. It would then be perfectly possible to provide that, after a certain number of summary convictions, the

offender should be tried before a jury for habitual drunkenness; and sentenced, if found guilty, to a period of detention in a special reformatory. Such proceedings would afford complete protection against improper imprisonment, and we believe that public opinion is, or will soon become, fully ripe for them. Of course it would be impossible to make sure that the drunkard when released would not return to drink; but this is no argument. We do not reform all our thieves, but we are not on that account deterred from imprisoning them. We have known of more than one instance of the excellent effect of sentences of imprisonment, upon men of respectable position, for assaults committed during drunkenness; and we believe that the legislation we suggest would not only meet the merits and difficulties of the case, but that it would be found to work smoothly and well in practice. A special reformatory for drunkards would, moreover, afford opportunities for studying their natural history, and for learning to discriminate, better than we can do at present, between intoxication as a vicious habit, and intoxication due to disease.

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(From the *British Medical Journal*,  
March 12.)

It is to be hoped that Mr. Dalrymple will in no way be discouraged by the reception which his resolution met with on Friday last. There can be no doubt that legislation for the proper reception, detention, and management of drunkards is most desirable. It is one of the special needs of our age and our country; and that it has not already been attempted is not to our credit. Nor is it easy to see that the subject is embarrassed by such weighty difficulties as Mr. Bruce would have us to suppose. The object contemplated is a special and limited one. It by no means includes the general repression of intemperance, although incidentally it might perhaps do much good in that direction. It aims rather at the care and cure of a species of insanity not hitherto provided for by our laws as to lunacy. What is

wanted is simply a modification of those laws, so as to make them applicable to the special case. We join with Mr. Bruce in hoping that the extension of education will do something to diminish the attraction of drinking, and to show its false pleasures in their true light; and we share his hopes that certain impediments may, by a change in our licensing laws, be put in the way of the inebriate. The frightful facilities now offered to the drunkard, and the elaborate temptations provided for those who have not yet become such, may probably be somewhat diminished. Experience, however, offers us little ground of hope that these or any other measures of a similar kind will suffice to prevent society from still presenting instances of the extreme results of that terrible vice, of which Mr. Bruce mildly states that it "may be *almost* regarded as a national curse." We shall still have instances of the finest natures succumbing to the seductions of alcohol, and sacrificing to an irrepressible taste for it the hopes and happiness of themselves and their families. Although cases of self-reformation are by no means so infrequent as the advocates of extreme measures sometimes assert, yet the experience of our profession will fully bear out that of all others who have known much of social life, to the effect that it is lamentably common for the habit to gain such a hold that by no ordinary means can it be shaken off. Under such circumstances, the poor victim himself bewails his weakness with regret not less keen than that of his friends, and to which the sting of remorse is added. All, however, avails nothing; and, with character lost and health and resources sacrificed, he sinks year by year, lower and lower towards a sad end. It is for such cases that special laws and special institutions are needed.

It is necessary to provide for two classes of those needing care—1st, those who seek it voluntarily; and 2nd, those whom it is desirable to seclude by compulsion. The first of these seem to present no great difficulty. That a man should be per-

mitted formally to enter into an agreement for a most desirable end, to forego his personal liberty for a definite period, can surely involve no departure from the principles of our jurisprudence; nor, admitting the principle, would the details of the plan be very complex. The establishments would require responsible supervision by Government inspectors, much as lunatic asylums do. As to their cost, this would probably be more than provided for by the industrial employment of the inmates and by their payments.

The compulsory detention of habitual drunkards who might decline to become, in the first instance, parties to the arrangement for their benefit, is a matter confessedly more open to criticism. Yet, supposing due precaution to be taken against the infliction of injustice, it might, we think, be done with the greatest promise of good. Establishments for this class would probably be less industrial and more expensive than those for the voluntary refugees, since they would unavoidably resemble prisons more closely, and labour would be less easily secured. Perhaps, however, under judicious management these difficulties would prove less in reality than in anticipation. At any rate, we have the assurance that, in America, establishments of the kind contemplated have succeeded admirably. We have already remarked that very exaggerated assertions as to the irreclaimability of drunkards have gained currency; and the experience of some of the institutions referred to, in which thirty or forty per cent. are said to have been permanently cured of the habit, supports our statement.

Let it be acknowledged that the habit of drunkenness, when once con-

firmed, is of such a nature in respect to its effects upon society as to warrant the compulsory control of its victim with a view to his restraint, and, if possible, to his restoration, and we can see no great difficulties as to the details. There would surely be no greater risk of injustice in carrying out the provisions of a law for this object than there is in respect to those for the care of lunatics. The fact must be fully and openly proved; and, after proof, its evidence must be kept on record and subject to supervision. As we have already remarked, responsible visitors of all such establishments would of course be appointed, and all doubtful cases would be promptly investigated.

It is our belief that a law of the kind suggested in Mr. Dalrymple's resolution would be productive of almost unmixed good. Its compulsory provisions already have its analogue in those which permit magistrates to send young criminals to reformatories for long periods rather than to prison for short ones. The stigma which it would affix on habits of intemperance, as partaking in part of the nature of crime and in part of that of insanity, and in both respects as justly depriving those who display them of their right to the full enjoyment of personal liberty, would be salutary to all classes. We are glad that the subject has been brought forward by a member of our own profession; and we trust that Mr. Dalrymple will, as he has promised, speedily accept Mr. Bruce's challenge and bring in a Bill. If judiciously drafted, it will be received, we can scarcely doubt, with great satisfaction by all who know as much of its necessity as do the members of the medical profession.



A MEDICAL TRIBUTE TO THE TEMPERANCE MOVEMENT.—For more than thirty years an energetic crusade against intemperance on the principle of moral suasion has been carried on. That it has produced great results none can deny; nor is it possible to withhold the tribute of warm admiration from those who at much self-sacrifice, in the face of constant ridicule and great opposition, have carried forward the temperance movement. It is perhaps doubtful whether the history of any nation can boast a more disinterested and better sustained effort at an internal reform.—*British Medical Journal*, February 26.

## STIMULANTS IN HEALTH AND DISEASE.

On Saturday evening, 15th January, an interesting lecture was delivered in Gresham College, London, by Dr. E. Symes Thompson, F.R.C.P., Gresham Professor of Physic, and Physician to the Consumption Hospital at Brompton, who, after a few preliminary observations, said that stimulants had much in common with foods. Food had been aptly compared to fuel; for just as the motive power of the steam-engine was derived from coal, so was the motive power of the human body derived from food. Both coal and food were consumed, and in their consumption supplied force. After some experiments with bread and alcohol intended to show their combustible character, the Doctor proceeded to observe that when alcohol was taken into the body it was burned to some extent, and was used the same as bread, but part of it passed away unchanged in the breath. With the view of illustrating the respective stimulating properties of chloroform, alcohol and ether, the Doctor showed by experiment that chloroform was much heavier than water, and sank to the bottom, that alcohol mixed readily with water, and that ether floated on the top. The latter was highly inflammable, and the same remark applied to the invisible vapour arising from it. Alcohol was inflammable, but ether much more so; but the action of both as foods was more rapid, or, in other words, they nourished more quickly than ordinary foods; and this was the principal value of stimulants. For this reason stimulants had been called quick or nerve foods. As to whether alcohol and ether were the *best* stimulants he would leave his readers to judge by the following experiment. Only that day he had seen a man lying in an exhausted state, and almost pulseless. He had been unable to take ordinary food in consequence of the extreme sensitiveness of his digestive organs. It immediately became clear that unless some steps were taken to nourish the poor fellow he would die of starvation. Now, had

he (the lecturer) given this man bread or meat, he could not have digested either, for he had not sufficient power in his digestive organs to convert them into nourishment. The following courses were open to him:—He might have given ether, which, as he had shown, burned very rapidly, and produced a quick action; or spirit, which they had also seen burned quickly and acted rapidly; or chloroform, which was not readily combustible; or, lastly, he might have given some kind of food requiring less digestive action than bread or meat, but which still was an ordinary food that might be digested rapidly. Instead of adopting any of these methods, he tried one of a different kind. He had with him some of Whitehead's Essence of Australian Meat, in thin cakes (a great number of which were distributed amongst the audience at the close of the lecture). These cakes contained most nutritious ingredients of meat, in a form which, by the addition of a little boiling water, could be converted into beef-tea. He had, in this way, a ready method of producing a strong form of beef-tea, which could be quickly converted into food. Had a minute been of immense importance, he might have given him ether, and produced a rapid effect; or ammonia, with equal effect; or spirit, in the shape of brandy-and-water, with a less rapid effect. He, however, preferred trying this beef-tea, and the result was that after an interval of ten minutes, during which he observed no effect, the pulse, which had been weak, regained its force; the surface, previously cold, and therefore like goose-flesh, became warmer; and the condition of exhaustion gradually passed away, and would not, in all probability, return for several hours. Had he given ether, the effect would have been produced almost instantaneously, and have departed in the same way; had he given alcohol, the effect would probably have been produced in from three to five minutes, and the benefit derived would have lasted perhaps

half an hour; but by giving him this animal food in the form of beef-tea, the effect, though slower in its production, was more lasting, for he doubted not but that, in this case, it lasted for three or four hours. This proved to his hearers that the essence of meat was as much a stimulant as alcohol would be, only differing in this, that the stimulation, though more slowly produced, was more lasting and real. This brought them to the conclusion that, if they required rapid, though not enduring effect, they must use ether or alcohol; but if, on the other hand, they were in no great hurry, and could afford to wait, they must then use foods—such as milk, beef-tea, or, if the patient were able to digest it, solid food, which, though not so quick to nourish, yet had a much more lasting effect. The quantity in every case must be regulated in accordance with the effect desired to be produced.

Dr. Thompson then gave a description of the processes used in manufacturing the various kinds of intoxicating drinks, in the course of which he explained that the different colours they assumed were due to something apart from the ingredients themselves. The value of spirits in many conditions of exhaustion and critical diseases was not to be over-estimated, but he could not speak so confidently of their value in health; but he had no hesitation in saying that it was very undesirable to take them in so large a quantity as they were frequently taken.

The lecturer then alluded in highly complimentary terms to the labours of Dr. Parkes, Professor of Hygiene at Netley Hospital, and read the concluding sentence of one of the learned doctor's works:—"If spirits neither give strength to the body nor sustain against disease, are not preventive of cold and wet, and aggravate rather than mitigate the effects of heat; if their use in moderation increases crime, injures discipline, and impairs hope and cheerfulness; if the severest trials of war have not been merely borne, but more easily borne without them; if there is no evidence that they are protective against malaria or other diseases, then I can only say the med-

ical officer will not be justified in sanctioning their issue under any circumstances."

The lecturer then spoke of wines, and divided them into the natural class and the unnatural class. The former should be produced from the simple juice of the grape, but the latter were fortified with spirit frequently produced from potatoes at a cost of about 1s. 3d. per gallon. Fortified wines contained more alcohol than it was possible to produce by natural fermentation of sugar. By natural fermentation it was impossible to produce more than twelve or fourteen parts of spirit in a hundred. Alcohol, added to port wine had the effect of stopping the fermentation previously going on in the wine, and it became diluted. The miserable effects resulting from the imbibition of such wine were seen in the cases of persons suffering from dyspepsia.

The lecturer then showed various experiments intended to explain the methods of testing the quantities of alcohol and acid in wine. Beer contained the largest quantity of alcohol, and in the cheapest form. The alcohol in beer cost 2d. per ounce, in gin from 3d. to 6d. per ounce, and in wine from 6d. to 2s. per ounce.

Dr. Thompson then offered a few remarks upon tea and coffee, and said that both were highly stimulating in their effect. Coffee was especially valuable to troops abroad. Whilst upon this subject the lecturer made another quotation from one of Dr. Parkes' works, where that gentleman states that soldiers who belonged to regiments exposed to great heat or cold, and who were teetotalers, were rarely on the sick list, whereas those who took spirits were frequently laid up.

In conclusion, Dr. Thompson expressed an opinion that education was a great antidote of drunkenness; that it elevated the moral tone of society, encouraged abstinence, and discouraged the custom of drinking alcoholic liquors. Rational amusements were also well calculated to remove the tendency to drink to excess. As regarded inebriates he thought they should be confined in asylums, as was the practice in America.

## THE LANCET ON ALCOHOLIC STIMULATION.

AFTER a great many fluctuations, professional opinion upon the question of alcoholic stimulation in disease appears to have recently achieved some real progress towards the establishment of satisfactory principles. There are still very wide divergencies between different authorities, and we fear that there is still a good deal of extreme and irrational practice, both in the direction of excessive stimulation, and of the opposite fault of an unreasonable fear of the remedy. But it seems to us that the outlines of a greatly improved knowledge, both of the therapeutic powers and the capacity for mischief which alcohol possesses may now be discerned.

In the first place, as regards *acute* diseases attended with febrile phenomena, three things are tolerably plain. The first is, that alcohol, when it acts well, acts as an antiphlogistic stimulant; that is to say, it lowers abnormally high temperature, it reduces the frequency of the pulse, and, while raising nervous power, it calms those disturbances of the nervous system which attend, if they are not caused by, the elevated temperature of the blood in pyrexia. The second great fact is, that there are the utmost differences between different pyrexial patients as to their capacity for receiving benefit in this way; that a large number of persons, especially among the young and the previously robust, do best without any alcohol; and that, among those to whom it is beneficial, there are some for whom three ounces of wine per diem is fully the physiological and therapeutical equivalent of twenty-four ounces given to another and smaller class of patients; and that nothing but careful tentative use of the remedy can tell, in any particular case, whether it is needed, and if so, in what quantities. In short, that all generalisations to the effect that you must, or must not, give wine by ounces, or by bottles in fevers or in inflammations generally are worthless and misleading. The third settled fact is

this, that it is often in those cases where alcohol used (on purely theoretical grounds) to be thought most dangerous — viz. in cases with very high temperature and flushed face—that it produces its best effects; and that to pour large quantities of stimulants into a fever patient simply because he is pale, and has a small pulse, is an unwarrantable proceeding. The above are *certainties*, and the following are *probabilities*. It is probable that alcohol owes part of its influence in fevers to an antiseptic agency, by which it destroys the activity of certain bodies—call them organisms, or not, as you please—by means of which the *contagium* sets up the febrile disturbance within the blood. In the case of inflammation, it is probable that alcohol, when it acts well, does so in part because it stimulates the sympathetic and contracts the arterioles, and in part interferes with the migration of blood-corpuscles through the vascular walls, as Binz and his pupils have shown that quinine can also do. It is probable that so far as alcohol can be applied to these purposes within the organism, it is of unmixed benefit. And there is much reason to believe that the singular differences between different individuals, as to the quantity of alcohol they can bear, depend on some unexplained difference in the respective rapidity with which alcohol is oxidised in the blood in different persons. For it is now known with certainty, on the one hand, that nearly the whole, even of a poisonous dose, is always oxidised in the body, and on the other hand, that the presence of large quantities of unchanged alcohol for any length of time in the blood, invariably poisons the nervous system. The antiseptic action, and the influence on the migrative tendency of the corpuscles, are most likely produced immediately that the alcohol mingles with the blood; it probably depends on the subsequent progress of oxidation whether the *general* effect on the patient will be

good or bad. One thing is certain: if signs of narcotism—*i.e.* paralysis of the nervous system—are produced, the alcohol is doing harm, and must be immediately diminished or stopped.

As regards *chronic* diseases, we are sorry to observe that there is very much less of intelligent progress in medical opinion than in the case of acute diseases. It is much to be regretted that a large number, even of highly-educated practitioners, will persist in acting on the assumption that in non-febrile diseases the amount of alcohol to be administered ought to be measured by the degree of debility, merely as such. The direct and very mischievous corollary of this is the practice, unfortunately daily increasing, of prescribing stimulants with lavish profusion in those numerous *nervous* affections to which weakly persons (more especially women) are prone. It is our duty, as medical journalists, to raise our voice to the utmost against this tendency. We are no bigots against alcohol; and we are heartily sick of the unthinking abuse which has been lavished on what it is the fashion to call "indiscriminate stimulation in acute disease." We declare our belief that the real

mischief lies at the door of those who are indiscriminate (because they are unthinking and illogical) in their prescription of alcohol for *debility, merely as such*. It is no figure of speech, but the literal truth when we say that hundreds of neuralgic, hysteric, and epileptic patients have been driven into drunkenness or lunacy, or both, by the careless folly of advisers, who had no better reason for the prescription of large doses of alcohol than the fact that these diseases are attended with nervous weakness, as they undoubtedly are. The assumption involved—that so much ingested alcohol is necessarily so much added nervous strength—is so gross a fallacy that no one would assent to it if expressed in plain words. Yet we constantly see it acted upon. We repeat, with all the energy of which we are capable, that it is a grave scandal and mischief that medical men should endanger in this serious way the powers of moral resistance of women and other weak persons, while basing their practice upon ideas that are illogical and untenable; and we trust that a reform in this respect will immediately be commenced.—*Lancet*, Jan. 1, 1870.

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## DRUNKARD'S OR ALCOHOLIC PARAPLEGIA.

BY SAMUEL WILKS, M.D.,

*Physician to and Lecturer on the Practice of Medicine at Guy's Hospital.*

I do not know that this is deserving of a distinct name from its possessing any pathological peculiarities, but as arising in connection with a very well-marked exciting cause, it may deserve your especial attention; and I refer to it the more because, as far as I am aware, authors have generally overlooked it. I have already told you how long-continued habits of intemperance in alcoholic drinks tend to the production of a fibrous or fatty degeneration of the various tissues of the body, and that, as a consequence, the membranes of the brain and spinal

cord become thickened, and the organs within wasted. This, of course, would give rise to what might be called a general paralysis of body and mind. But, besides these general results, we often meet with more direct effects on the spinal cord, and to these I particularly refer. I have now seen so many cases of persons, especially "ladies" who have entirely given themselves up to the pleasures of brandy-drinking, and have become paraplegic, that I have become pretty familiar with the symptoms. From what we hear of our continental

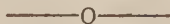
neighbours, it would seem that that diabolical compound styled "absinthe" is productive of exhaustion of nervous power in even a much more marked degree; it would seem that the volatile oils dissolved in the alcohol give additional force to its poisonous effects. Of course drunkards of all descriptions suffer from muscular and nervous weakness, but, as I before said, it is more especially in the legs that the effect is most striking. A loss of power is first observed, accompanied by pains in the limbs, which might indicate a chronic meningitis of the spinal cord, and in some cases there is anæsthesia. There is at the same time necessarily some amount of feebleness of other parts of the body as well as the mind, and thus an approach to general paralysis is produced; but sometimes the symptoms are almost confined to the legs, and resemble in character those of the locomotor ataxy.

I am now seeing a young married woman who for some time past has taken to "drink." She first of all had engorgement of the liver, followed by an all but fatal hæmatemesis. She recovered of this, but, continuing her evil habits, she began to get feeble in mind and tottering in her limbs. She appeared at times almost lost and spoke thickly. She had a difficulty in rising from her chair, and then by a great effort staggered across the room. She now appears gradually recovering.

I occasionally see in this neighbourhood a publican's wife who commenced business two years ago,

previous to which time she was temperate and well. Since this, the constant presence of gin before her eyes has been too much for her, and she has drunk the burning liquid in enormous quantities. This could not continue long, and now she has been confined to her bed for six months. She is almost paralysed, having very little power to move her limbs, not being able to raise the heel from the bed, and having no power to grasp with the hands; the muscles are flabby, and she has almost complete anæsthesia. The mind is also somewhat enfeebled.

Such cases I could multiply to almost any extent. Several I have seen end fatally, and in some a partial recovery has taken place. I have given the name paraplegia as a general term for the symptoms, but, as you might suppose in a chronic menigo-myelitis, they would vary, and probably very much, as the posterior cords of the nerves were involved. Thus, in the case just mentioned, there was anæsthesia, whilst in the case of a young man lately dead there was hyperæsthesia. In his case also there were severe pains in the limbs. In one young woman the symptoms very much resembled those of locomotor ataxy in the character of the pains, which resembled electric shocks, and also in her mode of progression. I might say that drunkards suffer often from pains in the limbs before there is any sign of paralysis.—*Lectures on Diseases of the Nervous System, in Medical Times and Gazette.*



## ALCOHOLIC STIMULATION IN DISEASE.

(To the Editor of the *Lancet*.)

SIR,—The admirable leader in your last number leaves little to be said upon the discreet use of alcohol, except on the point which has more especially led me to rank with those who are extremely cautious in recommending stimulants to their patients. I do not

object to the medical man employing alcohol if his judgment approve of its use, for he has as much right to administer it as any other form of medicine or diet; but I do strongly object, in the present unsettled state of the question as to the value of

alcohol as food, to his assuming that he possesses in it an equivalent for good nourishment. This assumption and grievous practical error I am witnessing every day. The instance, perhaps, where the error is most striking is in a case like that of enteric fever, where good feeding is so necessary, and where we have an opportunity of comparing the results of private and hospital practice. Now, in a disease of this kind, in which the temperature is six degrees above the normal standard, indicating an excessive amount of tissue-change in the body, and which, according to physiologists, is equivalent during one day to what would take place if the patient, in health, had walked fifty miles, it is evident that much nutriment is required. Theoretically, this is obvious; and, practically, the profession has universally agreed to follow Graves's dictum—to "feed fevers." Now, since the condition of the alimentary canal precludes the use of solid food, it might be thought that milk was the best substitute; and, as a matter of fact, I may say for myself that since I have treated my patients on four or five pints of milk daily my success with fever has been much greater than heretofore.

Now what do I constantly witness in private practice? The patient I visit is a young lad or young lady, and the doctor and myself perfectly agree as to the nature of the case, the course it will run, and the treatment required; further, to ensure the fulfilment of his orders, the services of two nurses have been procured, one of whom is in constant attendance with a devoted mother and sister. Now what is the condition of the patient who has been ill a fortnight with enteric fever? He

is extremely wasted, his skin dry and hot, restless, wakeful, or delirious, tongue parched, and his pulse 150. I am informed that the patient has had plenty of nourishment, and am shown the table before me covered with cups of beef-tea, jelly, brandy bottles, physic bottles, and wine decanters. I am further assured that the patient has had three or four cups of beef-tea daily, some jelly, eight or ten ounces of brandy, five or six glasses of champagne, and his medicine containing five grains of ammonia every four hours. To prove the regularity of the administration of these different things, the nurses display their written papers as vouchers. It is now evident that the patient is dying of starvation and stimulation. No mortal man could be in other condition who had been attempting to live on a little beef-tea and jelly for a fortnight, supplemented by brandy, champagne, and ammonia. In fact, I scarcely know a better formula to produce wasting, hot skin, parched tongue, irritable heart, restlessness, and delirium. I am not overdrawing the picture, and as for modifications of it, I witness them every day. I have no objection to wine or brandy in their proper place, and when judiciously administered; but I do strongly object to the assumption that they can be for any lengthened period of time taken as substitutes for food. I confess, too, to be almost overcome with regret when I see my hospital patients doing well, and see the young people in a rich man's house literally dying of *starvation and stimulation*.

I am, Sir, your obedient Servant,  
SAMUEL WILKS.  
Grosvenor Street, W., Jan. 3, 1870.

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#### DR. PAGET ON ALCOHOL AND CARBUNCLE.

THE *Lancet* recently contained a report of a clinical lecture on the treatment of carbuncle by James Paget, D.C.L., F.R.S., surgeon to St.

Bartholomew's Hospital. In this lecture Dr. Paget says:—"Another measure in the treatment of carbuncles which is supposed to be necessary, is

very high feeding and large quantities of stimulants. I learned the opposite of this in one of those cases which you will do always well to study—those, namely, in which the patient refuses to do what you advise him. It is from such cases that we may often learn what is commonly called the ‘natural history of disease’—its course undisturbed by treatment. A case occurred to me once of an old gentleman, eighty years of age, who had a carbuncle, as big as it could be, on the back of his neck, for it extended from one ear to the other, and from his occipital spine to the third cervical vertebra. He measured it for his own amusement, and it was fourteen inches over its surface transversely, and nine inches vertically—a carbuncle, then, of the largest size, and one, it might have been supposed, attended with considerable risk to life. I urged him very strongly to take a large quantity of what is called ‘support,’ for I was at that time under an impression of its necessity. He absolutely refused, however, and nothing would induce him to take it, I was therefore content to stand by and study the natural history of disease in this huge carbuncle; and the natural history of it was a history that one would have wished to witness in every carbuncle of its size, for no case could pass through its course in a better method. He led his ordinary abstemious life, took moderate quantities of food and of stimulant, lived through a carbuncle of the greatest severity, and finally made a complete recovery, and lived for several years after.” Dr. Paget relates another case which impressed him very much. The patient was a member of the medical profession, who had a carbuncle at the back of his neck of very considerable size. Sir Benjamin Brodie and Mr. Stanley attended him with Dr. Paget. The patient suffered from intense headaches, and he knew by experience that the only possible

remedy was to leave off stimulants entirely. Dr. Paget says:—One of these headaches occurred during the course of the carbuncle, at a time when he had put him upon a very full diet and abundant stimulant. He said then that he must leave off his stimulants and food, and we looked with some alarm on what would be the result on the progress of the carbuncle. I remember Mr. Stanley saying to him, in his distinct manner, ‘My dear fellow, if you don’t take food you will die.’ ‘Very well,’ he said, ‘then I will die, but I will not take food and increase my headache.’ According to his own wish, therefore, we reduced his diet to a very low level. The course of the carbuncle was not affected at all, unless it were for good; and after three or four days of this, which might be called comparative starvation, he described himself, in his own emphatic fashion, as being ‘as jolly as a sand-boy.’” Since that time Dr. Paget has watched carefully all the cases he has seen, and he says he is “certain that there is no good to be obtained by large feeding and abundant stimulants.”

The *Practitioner* of January last contained an article on the treatment of carbuncle, by Dr. James Grey Glover, who says:—“The administration of large quantities of stimulant and all sorts of nourishment in cases of carbuncle is now only part of a general fashion of excessive feeding that is already going out. I am satisfied that of all the forms of blood-poisoning which have been so prevalent of late that by alcohol is not the least common. I heard of a little infant, the child of a patient of mine, afflicted with diarrhœa, which, at the seaside, in two or three days, got half a bottle of brandy. Of course it died, very likely of pure narcosis. I am very glad that Mr. Paget has raised his powerful voice against the routine practice of excessive stimulation.”

## ALCOHOL v. COFFEE.

WE have periodically discussions as to the value of alcoholic fluids as articles of diet, some persons asserting that it is almost impossible, "in our artificial state of society," to get enough nourishment out of our food without the injection of a certain quantity of alcohol daily into the system, and other persons contending that every drop of alcohol which enters the body is a kind of poison, and likely to do a certain amount of harm. We have opened out this fertile subject once more on account of a curious circumstance which has just taken place in North Wales, and which shows that the anti-alcoholic views of a certain number of our ranks has penetrated deeply, and to a very low stratum of our society in this country. It appears that at the last meeting of the Wrexham Guardians, an offer of a Mr. Jones, a brewer, to present a barrel of beer for the Christmas dinner of the poor inmates of the workhouse, was taken into consideration. Mr. T. Rowland opened the discussion by moving that the offer be accepted, and remarking that we are told in the Scriptures that "wine maketh glad the heart of man." It seems, however, that the majority of the inmates of the workhouse are not willing to have their hearts made glad, at any rate by beer, for a canvass has been taken, with this remarkable result—58 in favour of the beer, and 127 against it. The alternative, however, was beer or a substitute, such as infusion of coffee. The result of the discussion among the Guardians of the Wrexham Workhouse was, that Mr. Rowland's motion was opposed by Mr. Whalley, M.P., and was lost by a majority of thirteen to five.

We think the paupers were quite right in preferring hot coffee to beer, but we must confess to considerable surprise in hearing that they have been so sensible, since our acquaint-

ance with the poor of London, at least, has been to the effect that they very much over-estimate in general the value of beer as an article of diet, or, indeed, as a luxury. After all the experiments of Lallemand, Perrin, Duroy, and Baudot, we have come to the conclusion, by our own clinical experience, that persons who do not take any form of alcohol are much less likely to be sickly than even moderate drinkers of beer and gin. Beer, we fancy, is a frequent cause of both gout and rheumatism, and of course gin is a ruinous fluid to the ill-fed working classes. We agree with the learned Boerhaave in his sentence, that "experience shows that water-drinkers have a better appetite, live longer, and keep their eye-sight longer than those who use beer." All who have studied diseases of the eye are well aware of the frequent degenerations caused in the organ by the use of alcoholic fluids. And although the opponents of all drinking of alcoholic drinks are apt to exaggerate the injury done by the moderate injection of beer and wine there can be no doubt that those who advocate, like the humble inmates of the Wrexham Workhouse, entire abstinence from those drinks, do so from a profound conviction that human life would be far simpler and more amenable to reason were all of us to determine not to partake of either alcohol or tobacco. Every one knows that the life of a teetotaler is much better than that of a *moderate drinker*, and we also hear from persons who have been in the Polar regions and in India that water-drinkers are better able to resist the extremes of cold and heat than those who drink beer, and we also hear that they are far braver soldiers. All honour, then, to the Wrexham paupers, and to their preference for aromatic infusions over alcoholic beverages!—*Medical Press and Circular*, Jan. 5.

## Notes and Extracts.

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**SODA WATER IN HOSPITALS.**—It has been notified in an official circular that the Secretary of State for War has approved of soda water being issued to patients in army hospitals, in cases where the issue is specially approved by the principal, or, in his absence, the senior medical officer of the command.

**RELAPSING FEVER AT THE LONDON HOSPITAL.**—The treatment has been in some cases expectant; in others, salines, an occasional purge, ice to check vomiting and allay headache, and two-grain doses of quinine, have been employed. The appetite is good in a majority of the cases; indeed, some of those who vomited still craved for solid food. Many of the patients are allowed meat, but the use of alcoholic stimulants seems the exception; and certainly the treatment so far appears very successful. — *British Medical Journal*, January 29th.

**CAUTION TO MEDICAL STUDENTS.**—We do not wish to moralise, but many instances have come under our notice, where high abilities, excellent prospects, and a generous disposition have all been made shipwreck of by the selection of unprincipled friends. The billiard-room, and cards, cigars, and beer, have been the first steps to ruin of not a few with whom we once associated on equal terms, and who are now either dead, killed by their own vices and follies, or are the veriest outcasts on the face of the earth, broken in fortune, in health, and in reputation. — *Lancet*.

**SPONTANEOUS COMBUSTION.** — "L'Union Médicale," of the 15th of February, contains an article from the pen of Dr. Bertholle, wherein full details are given of a case of spontaneous combustion. The subject of it was a woman, thirty-seven years old, who was addicted to alcoholic drinks. She was found in her room with the

viscera and some of the limbs consumed, the hair and clothes having escaped. The very minute description of the state in which deceased was found shows that ignition could not have been communicated from without, and, to all appearance, this is an additional case to those already upon record.

**MILK PUNCH AS A PLACEBO IN TYPHOID FEVER.**—The *Medical Times and Gazette* of Feb. 5 contained an article on "Belladonna in the treatment of Typhoid Fever," by Dr. Kelly, of Dublin, who says—"As regards the matter of stimulants, I absolutely interdict them in every form and shape to patients while under treatment of belladonna, as one of my objects is to see that neither its action is masked, nor its virtues rendered doubtful, by the complexity of remedial agents. I occasionally permit a teaspoonful or two of milk punch to be given at long intervals, certainly not with a view of thereby benefiting the patient very materially, but as a *placebo* covertly addressed to the minds of over-anxious friends."

**MANIA-A-POTU.**—It is stated as an interesting fact, in the *Philadelphia Reporter*, by Dr. Henry Yale Smith, that he has never seen a single case of mania-a-potu in the negro race. Dr. Autrey adds to that fact that he has never seen a case of delirium tremens in the Indian race, in twelve years' practice of medicine in Mexico, where three-fourths or more of the entire inhabitants are Indians, and who are much given to drink with excess, and drink the very worst of liquors. This is a fact that attracted his attention very forcibly, as he had met frequently with cases in other races of people. These two important facts have very naturally suggested the question—is only the Euro-

pean race subject to this disease?—*Medical Press and Circular*.

**VOLUNTARY PATIENTS IN ASYLUMS.**—In an article published in the *Journal of Mental Science*, January, 1870, Dr. Stanley Haynes advocates the extension to England of the Scotch system, by which persons desirous of restraint and supervision can be admitted as *boarders*, not as *patients*, into lunatic asylums, without medical certificates of lunacy. It is believed that many persons might be prevented from becoming permanent inmates against their will, if they had the opportunity of voluntarily placing themselves under control at the onset of a dangerous uncontrollable impulse. The author agrees generally with those who advocate legislation against drunkenness, and suggests the expediency of a special report, by a commissioner from this country, on the condition of the American "Inebriate Asylums," before decisive steps are taken at home.

**SELF-AMPUTATION DURING DELIRIUM TREMENS.**—Messrs. Francis and Grant, surgeons, Market Harborough, have communicated to the *British Medical Journal* (Feb. 5) an account of a case of an Irish stay-presser, who, in a fit of delirium tremens, cut off the whole of his external genitals with a rusty pair of scissors. "The arteriæ dorsalis penis and the spermatic arteries were tied, and a few smaller ones twisted, and the wound stitched up. It was necessary to introduce a large number of sutures, as the wound was large, and some difficulty was experienced in approximating the edges. Since then, the wound has gone on uninterruptedly well, notwithstanding its being subjected to pretty severe tension in some fits of delirium he has since had." Notwithstanding the gravity of the case, the patient had no stimulants except carbonate of ammonia, and the wound was all but healed at the end of fifteen days' treatment.

**ALCOHOL IN HOT CLIMATES.**—The *British Medical Journal* recently gave a series of articles by Henry Blanc, M.D., on the climate of the

shores of the Red Sea, its effects on Europeans, and preventable deaths. In one of these articles, Dr. Blanc, in speaking of the dangers connected with *sunstroke* says: "Referring to the casualties I have mentioned, I must state here, although I shall have occasion to consider the subject again on more general principles, that certain details of regimen must also be carefully attended to. To face the mid-day sun after a heavy meal (still possible for the new arrival), or fasting, are both equally injurious. A cup of coffee and a biscuit are quite sufficient, but also should be deemed imperative, before venturing in the sun. On a par, if not foremost, in danger, comes under the same circumstances the use of alcoholic drinks. I have seen, in China, a simple glass of brandy, in the case of a very abstemious man, cause sunstroke and death."

**A CLERGYMAN'S EXPERIENCE.**—At a meeting recently held at Frome, the Rev. Carr Glynn Ackworth, M.A., Vicar of Holy Trinity, Trowbridge, said, he thought one reason why the temperance cause did not make more rapid progress was, that while they could persuade men that strong drink was not a good thing in the abstract for the many, they could not persuade them that it was not good for *them*. If they wished the question to make way they must try to convince people that strong drink was not good. The physiological aspect of the question convinced him, and as an ounce of fact was worth a pound of theory, he would give them his experience. Fifteen years ago, when he was suffering from a disease which the doctors called by a hard name—*necrosis* of the thigh bone,—he was ordered wine and spirits, but after a time finding he derived no benefit from this treatment he resolved to try beef and mutton instead, and his doctor admitted that he had done as well as was possible. He thought the people wanted more judgment and determination for themselves. It was astonishing how some were persuaded by the doctors to take one thing and then another. He knew a patient who was recommended by one medi-

cal man to take port wine and no beer, and by another to take plenty of beer but no wine.

**CHEMICAL KNOWLEDGE REQUIRED BY THE MEDICAL PROFESSION.**—During a discussion on wine at the Society of Arts, on the 22nd December, 1869, Dr. Dupré said he spoke as a chemist, and all in his department of the medical profession laboured under this disadvantage in regard to alcoholic drinks, viz. that they did not see the effects of the prescription of such drinks in cases of disease. He thought it very desirable for medical men in the habit of recommending wine, not to judge it by the taste, which was a very deceptive test, but to ascertain something of its chemical constitution. At present, he feared that many doctors recommended a particular wine simply because they liked it themselves. The taste alone would not enable them to judge of the quality, because a wine might taste sweet, and at the same time be very acid, the sugar masking the acidity, or be very acid and yet very sweet; the acidity masking the sweetness, and he might add that sugar and acid together would mask the alcohol as far as the taste went.—If this suggestion were carried out; if no wines were recommended by medical men until they had made themselves acquainted with the chemical composition of the wines, the doctors would cease to prescribe wines at all, and one cause of intemperance, the medical prescription of intoxicating liquors, would die out.

**LEGISLATION FOR HABITUAL DRUNKARDS.**—In the House of Commons, on the 4th March, Mr. D. Dalrymple asked the House to agree to a resolution affirming the expediency of legislating for the proper reception, detention, and management of habitual drunkards. Treating drunkenness as a disease—a sort of temporary lunacy—of which, he argued, it was impossible for the patient to cure himself, he proposed that the drunkard should be able to seclude himself or be shut up by his friends, either in special wards of workhouses or in reformatories estab-

lished for the purpose. In support of his proposal he quoted the opinion of Mr. Mill ("On Liberty"), that society has a right to interfere with the regular drunkard; and he proposed to detain him as long as might be necessary, under medical certificate, for his reclamation. If necessary, the property of drunkards would be vested in trustees during the period of their seclusion, and the reformatories would be made self-supporting by the labour of the inmates. The resolution was seconded by Mr. Downing; but Mr. Bruce, while sympathising with its object, characterised it rather as the dream of a benevolent enthusiast than a practical proposition, and said that if Mr. Dalrymple had only tried to put his plan into a Bill, he would soon have discovered how enormous were the difficulties in his way. The great safeguard against drunkenness was the growing opinion that it is a disgraceful habit; but this proposal, instead of taking hold of the young man when some good could be done, only dealt with those on whom the habit had become almost, if not quite, inveterate. The idea was totally alien from our ideas; the law did not even compulsorily lay hold of lunatics unless they were violent or criminal; and if drunkards were to be shut up why not erring wives, young men who were ruining their families, and the infamous persons who ministered to the vices of youth? Mr. Dalrymple did not press the motion, but announced that he should take Mr. Bruce's hint and bring in a Bill.

**A NEW ALCOHOLIC DRINK FROM TEA.**—A paper was read at the rooms of the Society of Arts, Adelphi, on Wednesday, 22nd of December, by J. L. W. Thudichum, Esq., M.D., "On Wines, their Origin, Nature, Analysis, and Uses, with special reference to a new Alcoholic Drink made from Tea." He called attention to an array of some fifty bottles ranged on a table, containing various specimens of wine made in different ways from tea. Various kinds of tea had been supplied to him for his experiments from a surplus stock at the London Docks. These were tried, and amongst

them Souchong. An infusion of tea was made; sugar was put in, together with a certain amount of yeast, and fermentation began; and he was ultimately successful in producing what he called a "natural" wine of tea, specimens of which were upon the table for any persons to take who might think fit. Three of the bottles contained this natural tea-wine. By "natural" he meant merely the sugar fermented by yeast with the tea. The specimens exhibited were about a year old. The second varieties contained wine made from orange-flavoured Pekoe, and the third from Congou. Each gallon contained the extract from half a pound of tea. Another class of the liquors on the table had been fortified with alcohol. This was done because some drinkers averred that the wine was not strong enough. For the same reason he had added sugar to other samples to make them more sweet. Altogether six varieties of wine were exhibited. As wine was getting dearer every year, and as the difficulties of exporting it to such climates as China and Japan in good condition were almost insurmountable on account of it fermenting a second time, he thought the introduction of a wine from tea especially opportune. It was all but impossible for tea-wine to ferment, and even if yeast and sugar were added, and the bottles were kept at a temperature of the human body, one bottle in a hundred would hardly be damaged in six weeks. The tea made the wine a good stomachic; for, whilst it gave the alcohol in the smallest possible quantity, the tea counteracted the stupefying effect, because it exhilarated the frame: so that a man could exclaim, "I have had *something*!"

**TWENTY-NINE YEARS' EXPERIENCE OF NON-ALCOHOLIC TREATMENT.**—For the first four or five years of my professional life, I, like others, followed the usual practice, and administered brandy, wine, and beer, to my patients; but some twenty-nine years since I became convinced that alcoholic drinks were both injurious as articles of diet and unnecessary as a medicine, and I have ever since been

a personal abstainer, and have also banished them from my practice, and I have never had cause to regret having done so. Occasionally, indeed, I have had to yield to the wishes and opinions of some of my medical brethren, who in consultation have thought that the case we were treating would be benefited by the administration of alcoholics, and in some half-dozen cases, when away from all other stimulants, I have been compelled to have recourse to them; but I cannot in truth say that I have ever derived such benefit from their use as would induce me to again administer them except under compulsion. It is my firm and deep conviction that as a medicine they are for the most part injurious, and almost if not altogether unnecessary; and this opinion I have formed after having attended and successfully brought through without their use cases of typhus, malignant scarlet and other fevers, cholera, small-pox, delirium tremens, floodings, exhaustive and other diseases, in which it is the usual practice to administer large quantities of brandy, wine, or beer, and the only patient that I have ever lost after operation was the only one not strictly treated on the non-alcoholic principle. I may be permitted to say that I have thus for the last twenty-nine years treated without alcoholics all classes of patients, the rich and the poor, the sober and the drunkard, the over-fed and the half-starved, the over-worked and the idler, the moral and the grossly immoral, the inhabitants of well-ventilated and well-drained dwellings and those huddled together in miserable hovels without ventilation or drainage of any kind, the patients of an hospital for many years (fourteen), and the paupers of a populous parish for twenty-eight years. Under all these different circumstances, and in all these different cases, I have not found it necessary (except as previously stated) to administer alcoholic stimulants, and I am more than ever convinced that the practice is right, and more firmly resolved than ever to continue in the same course.—*B. Collenette, L.R.C.P. Edin., Guernsey.*

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ON ALCOHOLIC DRINKS AS AN ARTICLE OF  
DIET FOR NURSING MOTHERS.

BY JAMES EDMUNDS, M.D.,

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THE nursing mother is peculiarly placed in that she has to provide a supply of nutriment for the child which is dependent upon her as well as for the ordinary requirements of her own system. The nutrition of the child is to be provided for upon the same principles and by the same food elements as is the nutrition of the mother, the only difference being that the young child is possessed of less perfect masticatory and digestive powers, and therefore requires food to be presented to it in a state more simple, uniform and readily assimilable than the adult who is furnished with strong teeth, and possessed of a fully-grown stomach. The mastication, digestion, and primary assimilation of the sucking infant's food is thrown upon the mother's organs; but the tissues of the child are nourished precisely as are the tissues of the mother, and a nursing mother requires simply to digest a larger supply of wholesome and appropriate food. As a matter of course mothers with imperfect teeth or weak stomachs cannot perform the digestion of extra food for the infant so well as those mothers who have an abundance of reserve power in their digestive apparatus, and with such patients the question arises, how are they to make up for the deficiency which they soon experience in the supply of milk. Such mothers appeal to their medical advisers to prescribe some stimulant which will enable them to overcome the difficulty which they experience, and often are greatly dissatisfied if informed that there is no drug in the materia medica which will make up for structural weakness in

the organs which masticate, digest, or assimilate the food. The proper course for such women to adopt is a simple and rational one. They should assist their digestive apparatus as much as possible by securing an abundance of suitable and nutritious food, prepared in the best way and as is most digestible, while they should lessen the demands of their own system by the avoidance of bodily fatigue and mental excitement. These means, aided by that philosophical hygiene which is at all times essential to the preservation of pure and perfect health, will enable them to supply a maximum quantity of pure and wholesome milk; and further calls by the child require proper artificial food. Unfortunately such advice fails to satisfy many anxious mothers who refuse to admit or believe that they are less robust or less capable than other ladies of their acquaintance, and such mothers fall easy victims to circulars vaunting the nourishing properties of "Hoare's Stout," "Tanqueray's Gin," or Gilbey's "strengthening port," circulars which are always backed up by the example and advice of lady friends, who themselves have acquired the habit of using these liquors, and who view as a reproach to themselves the practice of any other lady who may not keep them in countenance as the perfection of all moral and physical propriety. Unfortunately the pressure of such lady friends is often so persistent as to paralyse the influence of a conscientious and thoughtful medical adviser, while the appetites and beliefs of such friends often throw them into active antagonism to any medical adviser who may not endorse the habits in which, as they believe and no doubt conscientiously, duty to their child requires them to indulge. The only course that a medical practitioner, whose family is dependent upon his practice, can safely take with veteran mothers on this question, is to let them have their own way without reiterated admonition. When once they have acquired the habit of depending upon large quantities of beer for nursing their children, they become perfectly infatuated, and are practically incapable of passing through the probationary fortnight which takes place before the digestive apparatus can work under its natural, but to them strange, conditions, while the temporary longing for beer, and the sudden lessening of the quantity of milk afforded by their strained and impoverished systems, are at once set down as clear proofs that their medical adviser is a crotchety and dangerous person, who must be superseded at the first convenient opportunity. Facts and arguments have no more influence on such mothers than they have upon opium-eaters, drunkards, or inveterate consumers of tobacco; while the extreme propriety of conduct which these ladies manifest, and the encouragement they receive from other medical men, make the convictions based upon their own personal sensations incon-

trovertible, and their position practically unassailable. I think I might fairly say that among the comfortable middle classes of society the views at present held on this question are so deplorable that a large proportion of children are never sober from the first moment of their existence until they have been weaned; while often after a few years the use of alcohol is again introduced to the children as a "medical comfort," as a part of their regular diet, or as an invariable accompaniment of all their juvenile visitation and company-keeping. Under such circumstances it is not surprising that Temperance reformers appeal in vain on this question, and that their facts and arguments are viewed with plausible indifference, or insidious opposition, by persons whose appetites and instincts have been undergoing debasement and perversion from the very dawn of their lives. My own deliberate conviction is that nothing but harm comes to nursing mothers, and to the infants who are dependent upon them, by the ordinary use of alcoholic beverages of any kind, and in the following remarks I propose to give very shortly and practically the results of a somewhat extended experience in reference to this question, and the reasons which I trust will justify to the minds of common-sense readers this expression of my own very strong convictions.

I fully believe that in most cases the use of alcoholic liquor does increase the quantity of milk secreted by the nursing mother. But what is the nature of the milk thus increased in quantity, and how is that increase brought about? These questions require consideration in regard to the constitution of the mother, and in regard to the health of the child. The supply of milk may be increased in the following ways:—

Firstly. By the transformation in the mother's system of some substance into milk which requires no digestion. For instance, if by any magic, water, which will soak through the stomach as it will soak through a sponge, without any tax on the masticating, digesting, or assimilating organs, could be transformed into blood or milk, it is clear that any quantity of milk could be supplied by the mother in whose system such a transformation took place. But that would be virtually equivalent to water being poured into a tube at one end and coming out as blood or milk at the other—a feat which, so far as I know, medical men have hitherto discovered no means of accomplishing.

Secondly. By such use of any stimulant to the mother's digestive organs as would temporarily cause them to digest a larger quantity of food than they would naturally do. If in this way a larger supply of food be forced into the mother's system, a larger supply of milk would be provided for the infant; and in that case the only drawback is that the mother's digestive appa-

ratus would be strained and injured in order to produce this result. Such injury might not be felt at the time, but it certainly would be incurred, and it would manifest itself in the long run, whether or not it were ever credited to the real cause, *i.e.* the use of alcoholic beverages as an unnatural goad to the digestive organs.

Thirdly. A greater supply of milk might be produced at the expense of the mother's blood and constitution, although without involving either of the two foregoing suppositions, just as a horse in good condition may be worked down by an amount of labour more than equivalent to the food it can digest, or—if the amount of its food be stinted—more than equivalent to the force yielded by the food which it consumes. In short, the results would be precisely equivalent to those which are exemplified every day in the London cowhouses, where, by stimulating but comparatively in-nutritious foods, such as the refuse of breweries and distilleries, healthy cows are made for a few months to produce an inordinate quantity of milk. The cows gradually waste away, lose their health, and are only saved from dying of consumption by the knife of the butcher, after a brief reversal of the treatment.

Fourthly. The quantity of milk may be increased at the expense of its quality by mere dilution, and this will readily take place if the mother be induced to drink an inordinate quantity of watery fluid. In this way the London cows are made to produce ready-made milk-and-water which needs no further dilution.

Fifthly. There are many substances which, when taken into the human system, are treated by the system as foreign and poisonous agents, and are immediately eliminated by the excreting organs. Thus diaphoretics, which increase perspiration, do so by virtue of a poisonous element which is most readily eliminated by the skin, and no sooner do medicines of this kind get into the blood than the skin immediately sets to work to get rid of them. The skin discharges them in a large quantity of aqueous perspiration derived from the blood, and many such medicinal substances may be recognised in the perspiration which they evoke. For instance, sulphur may be recognised by its odour; alcohol, which acts as a diaphoretic under certain conditions, and is commonly used as such to cure a cold, also may be recognised by its odour in the perspiration when it is thus eliminated. A more palpable illustration may be cited in the action of snuff, which when brought into contact with the lining membrane of the nose is at once washed away by a profuse secretion. Snuff, pepper, and other irritating substances, in like manner, when put against the mucous membrane of the eye, provoke a profuse secretion of tears, which washes them away and gets rid of them. Other substances, again, called diuretics, enormously increase the action of the kidneys. Some of these substances will act either

as purgatives, or as diuretics, or as diaphoretics, according to the conditions to which the patient is subjected while the medicine is in process of elimination. Thus, if a patient, having taken a diaphoretic, go to bed immediately, and be placed under such circumstances as to facilitate the action of the skin, a profuse perspiration will follow; whereas, if the patient had gone out into a cold atmosphere, the medicine might have been got rid of, not by the skin, but by the kidneys, and would have acted as a diuretic. A seidlitz powder, if taken upon an empty stomach, will act as a purgative; whereas, if taken with a full meal, it will act not as a purgative, but as a diuretic. Many medicines which ordinarily act as purgatives will, when taken by a nursing mother, act as lactagogues (milk drivers); *i.e.* they will be eliminated by the breasts instead of by the bowels, and will pass off by the intestines of the child instead of by the intestines of the mother; and the child, its system being a much more sensitive index than that of the mother, will often suffer greatly from drugs, or from crude or improper food, although the more callous system of the mother may not have shown that any impropriety of diet had been committed.

Alcohol, the essential principle of all intoxicating liquors, will under different circumstances act either as a purgative or as a diuretic or as a diaphoretic, or will be got rid of almost entirely by the lungs, or will act as a lactagogue, according to the circumstances and conditions of the alcoholised subject. The bilious diarrhœa which follows a debauch in hot weather, when the lungs are less able to eliminate the alcohol—the frequent urination required by habitual soakers—the sweating caused by a full dose of hot spirit-and-water on going to bed—the stinking odour of secondhand beer, wine, or spirit, which pervades the breath and perspiration of the drinker, and the profuse discharge of milk which comes from the breasts of a beery nurse—are all phenomena of precisely the same order, and which actually reciprocate with each other according to the exigencies and conditions of the system and the circumstances by which the drinker is surrounded. It is matter of common observation that a glass of spirit taken at bedtime by a nursing mother, not merely increases the flow of milk during the night, but causes the child to sleep heavily; in fact, the spirit under these circumstances acts, not as a purgative, nor as a diuretic, nor as a diaphoretic, nor does much of it pass off by the lungs, but it acts as a lactagogue, because the breasts are then in a state of great activity and form the readiest channel through which the mother's system can eliminate the alcohol, and for that elimination the breasts have to discharge a profuser quantity of milk; but the increased quantity of milk is produced by a mere addition of alcohol and water, or it is pro-

duced by impoverishing and straining the system of the mother. In either case, the poisonous influence of the alcohol is manifested in narcotising the child, and it cannot need much reflection to show that children ought not to have alcohol filtered into them as receptacles for matters which the mother's system finds it necessary to eliminate, and that probably nothing could be worse than to have the very fabric of the child's tissues laid down from alcoholised blood.

Probably few persons would be found to believe in the proposition that stout could be transformed into milk in the mother's system, if that proposition were stated in explicit terms, as by substituting the term stout for water in our first supposition. But in order to understand how it is that an increased quantity of milk is often produced by the use of alcoholic liquor, some deliberate discussion of this point is really necessary. There is a large proportion of medical opinion in England at this day which supports the hypothesis that alcohol serves as food in the body, and, as it soaks into the body without taxing the digestive apparatus, it would need no more effort for digestion or assimilation than it needs for mastication. That opinion rests not merely upon the beliefs and likings of a large mass of our population medical and non-medical—"practical experience" as it is called—but it rests also upon a shadow of scientific fact, as we have never yet succeeded in reproducing from the excretions all the alcohol which may have been taken into the body. Every one is aware that a person who has swallowed a small quantity of beer, wine, spirit, or pure alcohol, gives out a corresponding alcoholic odour for some hours afterwards, and therefore it is clear that some of the alcohol, being extruded in the same state as it was ingested, cannot have served as food, inasmuch as food never leaves the body undecomposed. I have always thought that the burden of proving the hypothesis that alcohol is decomposed in the body rests with those who propound it, as we may fairly begin by assuming that what we know to take place with a large proportion of the alcohol, also takes place with the remainder. In February, 1867, at Manchester, I delivered a lecture\* to the Church of England Diocesan Temperance Reformation Society, upon the properties of alcohol as a medicine and (in reference to the action of alcohol in the system) I condense the following sentences from a report of that lecture which appeared in the *Alliance News* of March 2nd, 1867:—

"Alcohol in the blood diminishes the osmosis or permeation of its fluids through the membranous tissues of the body, and thus the extra-vascular circulation or soakage of the fluid parts of the blood is interfered with. The alcohol also blunts the chemical affinities by virtue of which the tissues of the

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\* This Manchester lecture has since been reprinted by Heywood & Co., 335, Strand, W.C.

body and the fluids of the blood react upon each other. These two effects obstruct the onward passage of the blood through its capillaries and the blood accumulating behind distends the arteries and stirs up the heart to force on the current. Thus we get what is called 'the stimulating action of alcohol,' *i.e.*, a fuller pulse and a more laborious action of the heart—the real fact being that more heart labour is required to keep the circulation going just as when respiration is interfered with the breathing becomes more laborious."

"I can see nothing in the action of alcohol in the human body in any case or at any time but that of a paralyser, and I see in that view the key by which we can explain all the contradictory phenomena, and all the contradictory benefits which have been ascribed to the influence of alcohol. . . . Life assurance tables show that total abstainers live longer than even the moderate and respectable drinkers do, and all round, the facts come out to show that the sensations of comfort which are experienced when alcohol is taken, are but modifications of the comfort with which the man lies in the gutter when drunk. If we look to the influence of alcohol in the various kinds of sickness, the same simple key will unravel all the mysteries. . . . By giving alcohol as a 'stimulus' in exhausting diseases, I believe we always do what we should do by giving a dose of opium or brandy and water to comfort a half-suffocated patient (*i.e.* increase his danger). If that be so we reduce alcohol not only from the position of a food medicine, but we reduce it from the position of a goad, and we say that the suppositious stimulating or goading influence of alcohol is a mere delusion, that in fact alcohol always lessens the power of the patients, and always damages their chances of recovery when it is a question of their getting through exhausting diseases. There are some cases in which alcohol is invaluable, *e.g.*, as a narcotic in staving off certain kinds of convulsions, or in lessening the sensibility of the body under a painful operation. But these are cases which happen but rarely, and which do not come within the scope of that class of ailments for which we now see brandy and wine indiscriminately prescribed and relied upon. In the case of a child cutting its teeth there is a nervous irritation which throws the whole body out of gear, and the respiratory muscles become locked as it were by the violence of the spasm, and the patient may be killed by momentary suffocation through the very energy with which certain parts of the body act, just as a machine may become 'locked,' and in order to put it right you have to turn the steam down or turn it off for a moment. Under these circumstances alcohol is useful as a paralyser, a blunter of those extreme sensibilities which evoke the convulsive action by which a patient may be killed. But I think alcohol should be restricted to such cases as are usually treated by opium or chloroform. . . . I think that these arguments not only will come home to clergymen and other leaders of opinion, but also should influence even the mere rationalist who is not swayed by religious expediency and ready to give up even that meat which might make his weaker brother to offend. We conclude by simply affirming these propositions:—That alcohol never sustains the forces of the body as a food or as a food medicine; that alcohol never acts as a goad to the body; that it has no stimulating properties whatever in the sense of increased action either in rate or quantity; that alcohol always acts as a narcotic, and is always a paralyser of sensation and a lessener of action."

It will be found by those who refer to that lecture that I had been led to view alcohol, not as a food, not even as a true stimulant, but as always a narcotic and paralyser, and to aver that its true use in medicine was not that of a food or stimulant but that of a narcotic. I still hold to that view, and I am pleased to find that a view which I believe to be the only sound one as a scientific basis for the use of alcohol, has since been very fully

adopted by other medical men. The *Medical Times and Gazette* of December 18th, 1869, contains a very interesting lecture, entitled, "Physiological Research upon Alcohols," by Dr. Benjamin Ward Richardson, whose attention I called to the views which I had arrived at, and I now quote the concluding paragraphs of that very able lecture, as being one of the most recent and authoritative expressions of professional opinion upon this point.\*

"I have dwelt on these points from their immediate relation to practice. The evidence of the physicians is not less conflicting than the evidence of the physiologists. What shall we believe? Dr. Todd and his followers cure fever with alcohol. Dr. Gairdner, of Glasgow, treats fever with and without alcohol, and finds that he cures without better by far than with it. I will contest on neither side, because I know that as yet physicians have never prescribed alcoholic fluids with any precision at all, either in regard to quality or quantity, the common alcoholic drinks being anything; but I am prepared to contest, *if* under scientific administration *alcohol be found to cure fever*, that the medicine acts by lowering temperature and checking waste, not by sustaining as food sustains the body.

"The alcohols are strictly anæsthetics, and, indeed, the first published case of surgical operation under anæsthetic sleep was performed in 1839, by Dr. Collier on a negro, who was rendered insensible by breathing the fumes of alcohol.

"Speaking honestly, I cannot, by the argument yet presented to me, admit the alcohols through any gate that might distinguish them as apart from other chemical bodies. I can no more accept them as foods than I can chloroform, or ether, or methylal. That they produce a temporary excitement is true, but as their general action is quickly to reduce animal heat, I cannot see how they can supply animal force. I see clearly how they reduce animal power, and can show a reason for using them in order to stop physical pain, or to stupefy mental pain; but that they give strength—*i.e.* that they supply material for construction of fine tissue, or throw force into tissues supplied by other material—must be an error as solemn as it is widespread.

"The true character of the alcohols is that they are agreeable temporary shrouds. The savage, with the mansions of his soul unfurnished, buries his restless energy under their shadow. The civilised man, overburdened with mental labour or with engrossing care seeks the same shade; but it is a shade after all in which, in exact proportion as he seeks it, the seeker retires from perfect natural life. To resort for force to alcohol is, to my mind, equivalent to the act of searching for the sun in subterranean gloom until all is night.

"As yet alcohol, the most commonly summoned of accredited remedies, has never been properly tested to meet human diseases. I mean by this that it has never been tested as alcohol of a given chemical composition, of a given purity, and in given measures. Wines, beers, and spirits are anythings—compounds of alcohols, and compounds of alcohols with ethers and other foreign substances. It is time, therefore, now for the learned to be precise respecting alcohol, and for the learned to learn the positive meaning of one of their most potent instruments for good or for evil, whereupon I think they will place the alcohol series in the position I have placed it, even though their prejudices in regard to it are, as mine are by moderate habit, but confessed inconsistency, in its favour."

If this view be adopted, it follows that alcohol never yields up force in the body as a food on the one hand, and that it never

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\* Dr. Richardson's lecture will be found entire in the *Medical Temperance Journal* for April, 1870.

acts as a stimulant by exciting force on the other. All the observations which I have been able to make impress me with the conviction that, at any rate, the drug-action of alcohol is that of a narcotic, and not that of a stimulant; but in case it should hereafter be proved that alcohol does undergo oxidation in the body so as to yield up force, and thereby serve to some extent as food, the total abstainers' platform would still remain unshaken. We should then inquire, firstly, Is alcohol a good food? Every medical man would reply that alcohol, if a food, is certainly at the same time the cause of most of those degenerations of blood and tissue which constitute the diseases of the present day—a charge which cannot be brought against any other substance that ranks as a food; and there is no doubt that the physical injury resulting from the use of alcohol as a food would far outweigh the benefits which its possible yielding up of force might give. We should ask, secondly, Is alcohol a cheap food? The reply would be that you could get as much food in a penny-worth of oatmeal, beef-suet, or sugar, as you would in a shilling's-worth of alcohol. We should ask, thirdly, Is alcohol a safe food? The reply would be that, while gluttony and other abuses of true foods are practically very trifling evils, and evils moreover which seem to have a natural tendency to cure themselves, the drunkenness and other evils which arise out of the drinking usages of society are admitted on all hands to be the greatest curse with which society is at present afflicted, and to be evils moreover which have a tendency to perpetuate and aggravate themselves instead of curing themselves. Therefore, if alcohol were a food, it would be an injurious food, a dear food, and a dangerous food. What applies to alcohol as a food for hardworking men, applies to it quite as much for nursing mothers, whose strength may be overtaxed. But those who wish to follow this discussion out may refer to a five-column report of my lecture, already referred to, in the *Alliance News*, and they must not leave unstudied the recent lecture of Dr. Richardson.

As to the effects of beer-drinking upon nursing mothers I have observed the following facts. The mothers frequently make flesh, and even become corpulent; often, however, at the same time they get pale, and wherever they are not constitutionally robust in fibre they become inactive, short-breathed, coarse complexioned, nervous and irritable, and suffer from weakness of the heart and a long train of symptoms, which are more or less severe according to the constitution of the mother and the quantity of alcohol she imbibes. The young mother prematurely loses the bloom and beauty of youth. Often it is quite startling to meet some lady, who during an interval of two years has been transformed from a sprightly and charming young woman, into an

uninteresting and coarse looking matron. She has nursed her first infant for twelve months. With a pure and rational diet, she would simply have acquired a more dignified and womanly bearing, with a robuster gentleness of manner; but a liberal supply of "nourishing" stout—a glass of port at luncheon, and a little gin and water at bedtime—one after the other, were adopted, and imbibed regularly, in order to supply her infant with "milk." The presence of a nerveless apathy, or unintelligent irritability, afterwards proved that a liberal supply of "stimulants" was required to support her strength, and, although she ceased nursing, her own sensations convinced her of the necessity of continuing them. The outward and visible change is but an exponent of the degenerations and diseases which are taking root within. If there be a predisposition to insanity or consumption, these diseases are developed very rapidly, or they are brought on where proper management might altogether have tided over those periods of life at which the predisposition is prone to become provoked into actual disease.

Infants nursed by mothers who drink much beer also become fatter than usual, and to an untrained eye sometimes appear as "magnificent children." But the fatness of such children is not a recommendation to the more knowing observer; they are extremely prone to die of inflammation of the chest (bronchitis) after a few days' illness from an ordinary cold. They die very much more frequently than other children of convulsions and diarrhoea while cutting their teeth, and they are very liable to die of scrofulous inflammation of the membranes of the brain, commonly called "water on the brain," while their childhood often presents a painful contrast in the way of crooked legs and stunted or ill-shapen figure to the "magnificent" and promising appearance of their infancy.

Those ladies who adopt the general views I have thus expressed in relation to the nursing of their children, will want to know what is the "proper artificial food" with which to supplement their milk when it is deficient in quantity. With some patients the milk will fall off in quantity at the end of two or three months. With others, although the quantity may not fall off, the child seems unsatisfied; and there is a third class with whom a profusion of milk is supplied and the child thrives exceedingly, but the mother gets flabby, weak, nervous, pale and exhausted. In the last case, the mother is simply goaded on by susceptibility of her own nervous system, or by inordinate activity of the breasts to yield an amount of milk which her digestive powers are not equal to providing for. The treatment of such cases should be simply repressive. The mother should separate herself somewhat more from the child, and make a rule of only

nursing it from five to eight times in the twenty-four hours, while the neck of the mother should be kept cool in regard to dress, and cold sponging may be practised carefully night and morning. Her attention should be diverted by outdoor exercise on foot, and additionally in a carriage if necessary. Where the mother's milk, though apparently not deficient in quantity, proves unsatisfying to the child, great attention should be paid to varying the diet of the mother, while such staple foods should be taken as are most easily and thoroughly assimilated into milk. The unsatisfying quality of the milk will generally be remedied by taking a more varied diet, together with three or four half-pints of milk in the course of the day, accompanied with farinaceous matter, as in the shape of well-made milk gruel; and in case these measures fail, the only alternative is to supplement the mother's milk by obtaining a wet-nurse to suckle the child three or four times a day alternately with the mother, or by feeding the child with proper artificial food. The same measures may be resorted to where the milk, though satisfying in character, is deficient in quantity, and in preparing artificial food for the child it must always be remembered that the food requires to be adapted to the stage of development which is manifested by a young infant's digestive organs. The infant's digestive apparatus is in fact designed to digest milk, and to digest nothing else, but when the teeth are cut, farinaceous matter of a more or less solid character should be gradually mixed with the milk. Almost all the illnesses of infants under twelve months of age are caused by some gross impropriety of diet or otherwise on the part of the mother, for which the child suffers through the medium of the milk, or they are caused by feeding the child with improper artificial food. Thick sop and many other articles often given as food are as indigestible to an infant of three months old as cabbages would be to a lion or beefsteaks to a horse; and until the child has cut its teeth, it should have nothing but food resembling the mother's milk as closely as possible. Of course milk is an article which varies immensely in large towns, according to the management of the cows who yield it, and according to the manipulations of the persons who sell it; but by proper attention and careful watching there is never anything like as much difficulty in obtaining pure milk as there is in obtaining pure beer. Assume that we start with unadulterated milk of fair quality—that milk contains twice as much cheese, twice as much butter, and about as much sugar as is contained in human milk. By adding a little sugar so as to double the proportion of sugar also, and then an equal quantity of boiling water, the three main ingredients will be reduced to their proper proportions, and most infants will thrive perfectly upon nice fresh sweetened milk, diluted with

boiling water. If the milk be very rich, or if the milk pass undigested through the bowels, it should be diluted still more, or until the stools cease to contain milk. If a dishonest tradesman has already supplied the water, it is obvious the milk need not be further diluted. There are many groundless fears as to the extent and character of the adulterations to which milk is subjected—chalk, horses' brains, and various other materials have been brought by sensational scribblers before the vivid imaginations of mothers. I think I may say, without hesitation, that chalk is never, under any circumstances, used to adulterate milk, and certainly if any stupid adulterator were to put chalk into milk, it would be discovered by the first person who looked for it, inasmuch as the chalk would be deposited at the bottom of the vessel in the course of a few minutes. I have witnessed the process of adulterating milk over and over again at the places in London where milk from the country is wholesaled to the retailers. The materials consist of an ordinary tap of running water, a jug of burnt sugar, a dish of salt, and a clean stick. The men hold their half-filled cans of milk under the tap for a time proportioned to the length of their consciences, and the softness of their customers, but always until the "milk" presents an ominous blueness to the eye, and acquires an insipid watery taste. They then stir burnt sugar into it, drop by drop, until a rich creamy hue appears, and finally the flavour is brought up by a little salt. This is really the process by which milk is adulterated in our great towns, and shameful and disgusting though it is, yet it is not so bad as people imagine, being limited to mere cheating by dilution of the milk, and not extending to the use of deleterious or nasty ingredients.

The proper way to feed an infant of three months old, whose mother is only able to partially support it, is as follows:—When the child wakes in the morning it should not go to the mother, but should be taken away by the nurse, and immediately fed from the bottle, sucking its milk through a suitable teat. After the mother has breakfasted the child may go to the breast, and during the day it should be alternately fed from the bottle and nursed by the mother. At six o'clock the baby should invariably be placed in its crib, by the side of the mother's bed, and fed just before going to sleep, and the habit of going to bed at six o'clock should be strictly and invariably enforced. If once the child be allowed to come down to the family circle after dark, the habit of going to sleep will be broken, and the child will continuously cry to come down. In the course of the evening the mother may nurse the child once, and at ten or eleven o'clock, when the mother goes to bed, the child should be again fed from the bottle, and the mother should have a basin of well-made milk-gruel; and

by her bedside should be placed, at the last moment, as much gruel as she is likely to drink with relish during the night. Whenever the child is restless it should be taken out of its crib, gently, by the mother, and nursed, say two or three times during the night, and put back again into its crib, the child never being allowed to sleep with the mother. When the night is fairly over, and the child awakens, it should be fetched by the nurse, and have its first morning meal from the bottle. This plan of feeding should be persisted in continuously until the child has cut its teeth; and it is only when every means have been taken to ensure the sweetness, freshness, and niceness, not only of the milk and water, but of the bottle and the teat, and the child still fails to get on that, in rare cases, I advise the admixture of a little farinaceous matter in the way of food containing one part milk and two parts of properly sweetened barley-water. As the milk teeth come through, other farinaceous matter may be gradually blended with the milk, and there is nothing better than to begin at about eight months with a teaspoonful of baked flour, well boiled in a pint of milk and water, or in the water, to be afterwards cooled with milk. Oftentimes a little salt, as well as sugar, will materially help its digestion. The child will do well on that food—the quantity being duly increased—until it has cut almost all its milk teeth, when it may eat bread and butter, rice and egg puddings, and occasionally eat a boiled egg once a day. I believe that it is a great mistake to give red flesh meat to children in their early years, unless there be some very special reason for it, and then that it should only be temporarily used; but nice potatoes, flavoured with fresh gravy from a joint, may be given at dinner, as the child becomes able to feed itself.

The *British Medical Journal* of June 4th, 1870, contains an article headed “Doctors and Water-drinkers,” which is probably the most important article upon this subject in relation to the medical profession which has ever appeared in the medical journals of this country. The article is of considerable length, and is written ably, dispassionately, and honestly. This journal speaks in the name of an association which numbers 4,000 members of the medical profession of this country, and the article must be regarded as an exponent, according to its editor’s lights, of the position of our medical men in regard to the question of total abstinence. It contains the following remark:—“Probably almost every member of the medical profession in the three kingdoms himself uses dietetic stimulants, in bold defiance of gout and tissue degeneration, and honestly believes himself on the whole the gainer from them.” I do not know how a worse compliment could have been paid to the profession, and this sentence will probably be quoted in

support of the complaints made by Temperance reformers to the effect that in this country the greatest enemies to the Temperance reformation are the medical men, and that they by their personal example and their indiscriminate prescription of 'dietetic stimulants' are responsible for much of the present drunkenness, and for most of the relapses which occur to those who have been reclaimed. Certainly the proportion of medical men who are free from the influence of "dietetic stimulants" upon their own stomachs, and therefore in a position to judge for their patients upon this question without bias, is very small, but I am able to state that it is not so small as is represented by the *British Medical Journal*. My experience in my own person, after very careful testing of my health, working-power, and capacity for enduring mental strain, has convinced me that I am the gainer in every way by abstaining, and I have been a total abstainer for some years, and an abstainer practically for many years previously. I may also add that my partner in life has arrived at the same convictions and the same practice; and that, by adopting the principles to which I have already given expression, she has preserved her health, and satisfactorily nursed five children for twelve months each. Indeed, we have great cause to be thankful for the health of ourselves, and for the health and promise of our children; and we ascribe these largely to abstinence from alcoholic beverages. I could cite large numbers of families in my own practice who have been under my observation for years, where the mother and children have derived similar benefits from total or practical abstinence, and no language would be too strong to express my convictions on this point in a general way.

4, Fitzroy Square, London, W.,  
June, 1870.



## DR. BEALE'S DEFENCE OF DR. TODD.

So much has been advanced against the opinions and practice of the late Dr. R. B. Todd, that it is quite refreshing to meet with any one who will stand up to vindicate his views respecting the use of alcohol. This has been done by Dr. Lionel S. Beale, in an able lecture delivered at King's College on the 5th of May, and reported in the *British Medical Journal* of the 14th and 21st of May. The lecture is on "Medical Progress, in memoriam of R. B. Todd." It is highly laudatory of Dr. Todd, and gives an explanation and a defence of his use of alcohol. Dr. Beale shows that Dr. Todd was a man of great ability and an innovator, who

dared to adopt a line of treatment in opposition to what was considered orthodox practice. In the earlier years of his life, Dr. Todd, as was then common, treated cases of acute pericarditis with bleeding and mercury to salivation, and pneumonia by bleeding and tartar emetic. Slowly and gradually he modified his treatment. "Pericarditis and peritonitis were treated with opium without the mercury, stimulants were given, and the lancet was completely laid aside. The strength was supported, nourishing food was given, and if the powers of the patient flagged brandy was administered, at first in small doses, but in many low cases it was increased to considerable quantities." There has been a great deal of discussion as to the propriety of Dr. Todd's method of employing alcohol; and certainly the records of his cases do not show favourably when contrasted with cases treated with a more limited quantity of alcohol. The question as to the use of alcohol is beset with difficulties. There are strong prejudices in favour of its use, just as there were a few years ago in favour of bleeding. When alcohol is administered, the patients, in some cases, appear to be benefited. Are they really so? Is the alcoholic treatment necessary or useful? These are serious questions. How may they be satisfactorily answered? Certainly not by assumptions founded upon conjecture, but by careful observation and experiment, and by the application of the same inductive reasoning as we employ in chemistry, physics and physiology. Dr. Beale appears to think that what many would call the excessive use of alcohol is, in some cases, really necessary, and that the patient's life seems sometimes to depend alone on the frequent doses of alcohol. But when we know that in apparently similar cases patients treated with a much smaller quantity of alcohol, or indeed without any, make as good recoveries as the alcoholised patients, we are compelled to doubt the soundness of Dr. Beale's opinion as to the utility of the large doses of alcohol. Dr. Beale says that "much objection was made to the amount of stimulants given; but the arguments advanced against the system pursued have been satisfactorily answered."

We have never heard or read these satisfactory answers to the objections to the excessive use of alcohol, and we do not think it is possible to satisfy the minds of searchers after scientific truth of the propriety of such large quantities of alcohol being introduced into the human body. The results of the treatment of fever at the Glasgow Fever Hospital, and at the Glasgow Royal Infirmary, upon what we may call anti-Todd principles, show that fever may be efficiently treated without the large doses of alcohol used by Dr. Todd. Although the use of alcohol is so common in medical practice, there is an increasing number of medical men

who think the time will come when, like the lancet, alcohol may be given up, and safer and more certain modes of treatment take the place of the alcoholic.

It has been assumed that alcohol acts beneficially by increasing nerve-nutrition, imparting strength to the heart, and preventing the rapid oxidation of the tissues. But there have never been any experimental proofs that alcohol acts in this way. Dr. Beale says—

“More recent research has shown us how the beneficial action of alcohol in very bad cases of disease, may, in some measure, be explained scientifically. In very low states of the system the albuminous matters are fast escaping from the blood, the blood corpuscles are undergoing rapid disintegration, and the *living matter* or *bioplasm* of the vessels of the neighbouring tissues of the blood is growing very quickly. Now, alcohol tends to modify all these phenomena; it reduces the permeating tendency of the serum; it checks the rapid growth of living matter; and interferes with or modifies chemical changes taking place in organic fluids.”

This attempt to explain the beneficial action of alcohol is certainly not satisfactory. We cannot believe that alcohol acts usefully by coagulating the albuminous matters of the blood. Dr. Anstie, although favourable to the use of alcohol in acute diseases, objects to Dr. Beale's theory of its action. At page 273 of his book on Stimulants, Dr. Anstie says he cannot “see the probability of Dr. Beale's suggestion that alcohol as taken into the system in acute diseases coagulates the albuminous matters of the blood, and so hinders their permeating the tissues.” “And, besides, there is an insurmountable obstacle to this explanation, in the fact that precisely similar benefits (though in a less degree) may often be obtained by the use of carbonate of ammonia, a substance which we certainly cannot suppose would act in the way referred to.” If it is not possible to give an explanation of the way in which alcohol acts beneficially, it is easy to show how it acts injuriously; but if we were bound to attempt to give an account of its therapeutic action, we should be disposed to adopt the views of Dr. T. K. Chambers. At page 314 of his “Clinical Lectures,” he says, “Alcohol is really the most ungenerous diet there is. It impoverishes the blood, and there is no surer road to that degeneration of the muscular fibre which is so much to be feared. And in heart disease it is more especially hurtful by quickening the beat, causing congestion and irregular circulation, and thus mechanically inducing dilatation of the cavities.” At page 573 of the same work, he says, “I think we may, without hesitation, conclude that alcohol is primarily and essentially a lessener of the power of the nervous system;” and at page 571 he says, “Let us be a little more particular in our inquiries, and then I do not think we shall be able to trace any direct increase of force to alcohol, even in the

smallest doses, or for the minutest periods of time. The sort of researches of which those detailed are an example, show pretty clearly that its continuous use (*i.e.* in small divided doses) does not add power to vitality, and I think we shall not fail to come to the same conclusion from observations made upon its more immediate effects." These views of the action of alcohol seem to us far more reasonable than the assumptions of Dr. Todd, and the attempt on the part of Dr. Beale to explain the beneficial effects of alcohol.

The use of alcohol in the treatment of disease arises generally from the same causes as its use by the greater part of the community as an article of diet, namely, custom and want of investigation into its properties. The people drink alcoholic liquors not because they have acquired a knowledge of their chemical composition and physiological action, but because it is the custom of the country. They have been trained up to take these liquors, and have acquired an appetite for them; but as soon as persons of common sense proceed to inquire into the matter, and try for themselves whether these drinks are necessary or useful, they discover that the common opinions as to the value of these drinks for dietetic purposes are mere delusions, and that men are better without than with them. And it is so with the medical use of alcoholic liquors. It is the fashion to use them, just as formerly it was the fashion to use the lancet. All sorts of virtues are ascribed to them. They are, as Dr. Chambers remarks, "nice." Doctors and patients like them—they have been used from the earliest days of physic, and their use is orthodox practice. But when medical men inquire—when they throw off the shackles of fashion and appetite, and investigate for themselves the composition of alcoholic liquors and their mode of action when used in disease—they come to the conclusion that most of the opinions as to the beneficial action of these liquors in disease are utterly destitute of any scientific evidence in their favour. The number of these searchers after truth is on the increase, and we are glad to know that the reckless prescription of alcoholic drinks is not so common as formerly. If alcohol, however, is ever used as a medicine, it ought to be used in such a way that the physician may know what he is prescribing. That cannot possibly be the case when he orders wine or beer. Any one who, either for professional or educational purposes, has analysed varieties of fermented liquors, will know that wine and beer are liquors differing greatly in composition, no two samples being exactly alike. Hence the prescription of these liquors is as unscientific as it is unnecessary, for there are plenty of alcoholic medicines of a more definite character. Dr. Beale says:—

"Alcohol has been given in many forms—wine, brandy, whiskey, or other spirits, with water, and spirits of camphor combined with medicines. The

patient need not know that he is taking a stimulant, if the friends inform us he would rather not be told. Some persons do not object to take alcohol as a medicine, although they prefer to remain in ignorance that they are taking it at all."

It appears from this that the efforts of temperance reformers are telling upon the people; some object to take alcohol, and others would rather remain in ignorance that they are taking it. This shows that the light is spreading among the people, and, if the profession do not find out the truth respecting alcohol, the people will find it out for themselves.

Although Dr. Beale is a defender of the use of alcohol in disease, he does not consider it as an essential part of ordinary diet, and comes pretty near to our opinions on that point. He says:—

"But while I am obliged to speak thus favourably of the use of alcohol in the treatment of disease, it may interest you if I say a few words with reference to taking alcohol in health; and, I confess, my conclusions as regards giving alcohol to the young are not much at variance with those who advocate extreme temperance. My own experience leads me to believe, that the majority of young healthy people would do well without alcohol; and I believe the habitual daily consumption, by young persons, of considerable quantities of wine or beer, to be positively injurious to health. I regret to say that the *hard-working student*, politician, professional man, and busy merchant, have been advised to take, 'as a regular daily allowance, a bottle of sound ordinary wine of Bordeaux.'—*The Practitioner*. I cannot judge of the effects of such a dose on people generally, but I should be sorry to take myself one-fifth of the quantity recommended; while it is quite certain that what would be good for the middle-aged politician, professional man, and busy merchant, might be very bad indeed for the hard-working student. Up to the age of forty very little stimulant is, as a general rule, required, and I expect most persons of average health would get on better without any. My own personal experience is this:—I was never very strong, though always able to get through a very considerable amount of physical exertion without fatigue, and I have not been a very idle student. I could, and believe I can now, walk twenty miles a day without fatigue. Up to the age of forty I hardly ever touched stimulants of any kind, and when I did take a little, I not unfrequently got an attack of sick headache before my ordinary condition of health was resumed. Lately, however, I have found the advantage of half a tumbler of ale daily; and I can bear half a glass, and sometimes a glass of wine, without suffering. I daresay as I grow older I may, like most persons, require a little more; but, when in the country, and, taking plenty of exercise, I feel very well and contented upon a moderate allowance of good simple food without any stimulants whatever. The experience of some members of my family who have lived to be old, and that of many persons of whom I have inquired, accords with my own."

The personal experience of all who take very little alcoholic drink or none at all agrees with this experience of Dr. Beale. But what is of more importance is, that the almost uniform experience of all who formerly used strong drink in more liberal quantities, and even in what would be generally considered excess, but who have now given up its use, is that they are much better without it, and their conviction is that its use is always more or less injurious. This opinion is slowly but surely gaining ground.

It is not confined to any class of the community, but wherever abstinence from alcoholic drink is fairly tried the verdict is always in its favour. And the more the subject is investigated, and the longer abstinence is tried, the deeper becomes the conviction of the uselessness and injurious tendency of alcoholic liquors. Dr. Beale thinks that as he grows older he may require a little more stimulant, and that in old age stimulants are really required. Our opinion differs altogether from that of Dr. Beale. We are satisfied that the aged are much better without any narcotic stimulant. This opinion is based upon an extensive acquaintance with aged abstainers of all classes, and we are convinced that they bear the trials of age better, and enjoy the powers of body and mind to a greater extent, than those persons who use alcoholic drinks, even in the strictest moderation.



## PHYSIOLOGY AS A BRANCH OF EDUCATION.

THE first sentence in the first number of this journal asserted that "One of the chief causes of the use of intoxicating drinks is want of correct ideas as to their composition and physiological action." We are every day becoming more deeply convinced of the truth of this opinion as to the general absence of a sound knowledge respecting alcoholic liquors. This want of knowledge is not surprising when we recollect that chemistry and physiology do not usually form a part of the education of the people. Without the aid of chemical analysis, it is impossible to ascertain the composition of the air we breathe, the food we eat, or the liquors we drink; and without some chemical knowledge it is not possible even to understand the results of analyses made by others. The greater part of the people have never acquired chemical knowledge, and for want of it they entertain the most erroneous notions respecting the composition of wine, beer, and other alcoholic liquors. In many schools, however, chemistry is now regularly taught, and we hope to see the young grow up better able to understand the nature of strong drink, and the advantages of Temperance, than the great mass of the present generation. There is a growing conviction that physiology should also form a part of popular education, which has hitherto been too much confined to languages and mathematics; but it is now seen that a knowledge of things is as important as a knowledge of words. *Professor Youmans* says, "The question of the relative rank various kinds of knowledge—what shall be held of primary importance and what subordinate—is urgent and serious. As life and health are the first of all blessings, to maintain them is the

first of all duties, and to understand their conditions the first of mental requirements. Shall the thousand matters of more distant and curious concernment be suffered to hold precedence of the solemn verities of being which are woven into the texture of familiar life." We are convinced that there is no kind of secular knowledge of more importance than physiology, for from it we may learn how to preserve "a sound mind in a sound body." Our observation of men and women in various classes of society, in health and in sickness, has satisfied us that want of physiological knowledge is a fruitful source of intemperance, disease, suffering, and death, and that to render effectual the efforts of sanitary and temperance reformers nothing would be of greater service than the diffusion of physiological knowledge throughout the community. It is a kind of knowledge of the deepest interest and the highest importance. There is something extremely interesting in the study of the laws of life. To see how all living beings, vegetable and animal, live and have their being; to see the wondrous way in which the plants convert inorganic matter into substances fitted for the support of animal life; and then to see the animals using these substances to form their bodies, and to generate heat and force, and finally reducing these substances again to inorganic matter to furnish material for the constructive energies of the plants, is a kind of knowledge of great importance that comes home to our own bosoms and bearings. Physiology teaches us how our bodies are formed, how they are repaired, how they are preserved; it teaches us the value of fresh air, pure water, and wholesome food, and enables us to understand the value of temperance and other sanitary reforms. We hold, therefore, that in school-teaching elementary physiology ought to be included. That there may be difficulties in the way we willingly admit; but when the importance of physiological knowledge is recognised, an intelligent teacher will soon overcome the difficulties. Of course it is not proposed to convert all the children into professed physiologists or chemists. This is impossible. But a considerable amount of information may be given which will be remembered, and exert a beneficial influence in after life. Perhaps it may be objected that "a little learning is a dangerous thing." This objection, however, will not hold good in reference to a knowledge of physiology; for a little is often of great service, and is certainly to be preferred to the general ignorance which now exists.

There are several popular works which will help a teacher who wishes to give useful lessons in physiology. Of course it is desirable that the lessons should, if possible, be illustrated with diagrams, models, preparations, and by the dissection of some of

the lower animals. More than thirty years ago the Messrs. Chambers, of Edinburgh, published a little volume of "Rudiments of Animal Physiology," for use in schools, and for private instruction, by Dr. G. Hamilton. There is one feature in this work which renders it of great value to any one trying to give popular lessons on physiology. It gives instructions for preparing diagrams, and for dissecting parts of some of the lower animals for the purpose of enabling the pupils to understand the structure of the different organs of the human body. There are other works specially adapted for school instruction. The smallest of these is "The Body and its Health," a book for primary schools, by Dr. Mapother, of Dublin, which is written in very simple language, so that boys and girls may understand the useful facts about the body and its health. It is certainly the cheapest, the smallest, and, for its size, the most comprehensive book on the subject we have ever seen. But the doctor might have given the children safer information than the following respecting alcoholic drinks:—

"Liquors made by *fermenting* grains and fruits are thought to be heat-foods by those who on a journey take a little spirits and water or beer, as it warms them and keeps off hunger. Such drinks taken now and then may cheer us, but their daily use hurts us, and all know that the drunkard destroys body and mind, and ruins those who depend on him. Much spirits, if taken suddenly, kill the brain at once; and this noble part, as well as the stomach and liver, suffers by small doses if taken often. There is divine sanction for the use of wine which serves the sick or sad man and makes friends happy; yet no one can deny that the good strong drinks have done weighs as nothing against the evil their abuse has wrought."

There is in this statement just enough of error to induce the children to believe it may be right to drink some of the liquors alluded to, and, as these liquors possess the power of leading the young as well as the old to acquire a liking for them, it is possible that even the little Dr. Mapother has said in favour of strong drinks may be the means of furnishing some recruits to the ranks of intemperance.

The largest work published for the purpose of teaching physiology as a part of general education is "A Description of the Human Body and its Structure and Functions," by John Marshall, F.R.S., F.R.C.S., &c. This book is designed for the use of teachers in schools and young men destined for the medical profession, and for popular instruction generally. It is very carefully written, and is illustrated with nine coloured physiological diagrams. When a teacher has mastered this book he will be qualified to give lessons to schools of a high class. Mr. Marshall has not marred the usefulness of his book by doubtful statements about fermented liquors. He gives the following account of the effects of alcohol:—

“In the habitual drunkard the coats of the stomach lose their tone and their power of secreting healthy gastric juice; the capsule of Glisson surrounding the portal veins, and the hepatic arteries and ducts within the portal canals of the liver, becomes the seat of a morbid deposit, even in those who indulge largely in ardent spirits, though not actually drunkards. By its subsequent contraction, this deposit draws up the liver in all directions, strangles in its deadly clasp the blood-vessels and ducts, causes alteration in the substance of the gland, and thus lays the foundation for dropsy and for other diseases, which end only with the extinction of life. In other cases, and more speedily, the brain and spinal cord become affected by alcoholism, the natural consequences of which are exhaustion and nervous power, tremors, depression only to be relieved by a new debauch, and want of self control to resist temptation; and at last one of many seizures of delirium tremens or the delirium of drunkards brings to a close a useless and wretched existence.”

This picture of the dire effects of alcohol is likely to have a better effect than Dr. Mapother's mixture of truth and error. As we do not intend to notice all the works on Physiology intended for schools, we will mention only one more, but it is one well adapted for use in superior schools, namely, “Lessons in Elementary Physiology,” by Dr. Huxley. These lessons are intended to serve the purpose of a text-book for teachers and learners in boys' and girls' schools. Dr. Thomas Alcock has published a series of “Questions on Huxley's Lessons.” These two works are well fitted to aid in the introduction of physiology as a branch of general education.

Dr. Lankester has just issued a small work with the title “What shall we teach? or, Physiology in Schools.” As the time is at hand when every child will be educated, the question, What shall we teach? is one deserving of serious attention; and we think that no one can read Dr. Lankester's book without coming to the conclusion that every one ought to be taught the elementary principles of Physiology. Not only the children, but adults also of all classes, ought to be made acquainted with the laws of health. Dr. Lankester shows the importance of Physiological knowledge to legislators, medical men, gentlemen connected with the press, and the clergy. If our legislators possessed this knowledge we should have better laws enacted for the preservation of the public health; and if the members of vestries, town councils, and other local authorities, possessed this knowledge, the present sanitary laws would be more readily and effectually carried out. It may be said that our forefathers lived without this knowledge; why then should we trouble ourselves about it? We know that our forefathers did not possess the same knowledge of the laws of health as we do, and they suffered more from disease, and lived shorter lives than we do. We now know that a large part of the disease which afflicts mankind and shortens their lives, arises from causes which men may control, if they only acquire the necessary knowledge, and use the means

Providence has placed at their disposal. Dr. Lankester, in speaking of the power of the clergy to promote the public health, says—

“In the New Testament we find that our Saviour went about doing good. He healed the sick and raised the dead. He did this out of sympathy with those who were distressed and afflicted. If these, then, are the sanctions for attending to the physical welfare of the people, surely every clergyman should be taught what are the laws by which life and health are maintained. They are God’s laws, and cannot be broken with impunity. Disease is the result of a broken law, and by acting in obedience to the healthy law, and inculcating in others the necessity of obeying these laws, the minister of the Gospel of all living men may do the most good.”

The advocates of Temperance ought certainly to make themselves acquainted with physiology. The temperance question is not one of mere expediency; it is one of principle. Abstinence from fermented liquors is either right or wrong, and it is only by a study of the physiological action of these liquors that the propriety or impropriety of their use can be ascertained. If it be true, as we, after many years’ investigation, believe it is, that these liquors are not in any sense necessities of life—that they do not promote physical or moral excellence—that their use is fraught with danger to the health and morals of the people; and that their disuse would prevent a great amount of human suffering, degradation, and death—if all this be true, then abstinence from strong drinks appears to be our duty as intelligent and responsible beings; and we are anxious, therefore, to see the rising generation taught the laws of health, in order that they may understand some of the wonders of their own bodies, and learn to avoid all things which tend to derange the action of their bodies and minds, to engender disease, and to bring about premature death.



## NERVOUS DEPRESSION.

THE mental disquietude which usually accompanies chronic indigestion, is not one of the least of its attendant evils. The horrible train of symptoms, following long-standing stomach disorder, have been variously designated, according to the enlightenment of the age, or the peculiar views of the writers; hence such terms as melancholy, hypochondriasis, nervous depression, disorder of the nervous system, &c., have arisen, in consequence of the *effects* being more attractive, from their peculiarities and apparent complications, than the *cause* of all the mischief, which is so easy to be seen, that, for the most part, it escapes observation. The loss of appetite, the discomfort, the

inability to digest and properly assimilate the food that is taken, soon produce lassitude, weariness, and weakness. Prostration is unmistakeably felt, and either of his own accord, or at the urgent solicitation of friends, the invalid flies to stimulants for relief and temporary "support." This is the gravest mistake the dyspeptic can make. Alcohol, in any form, is a dangerous remedy. When the sufferer who has "a delicate stomach" relies upon his wine, brandy, or bitter beer, for food or medicine, he will find, sooner or later, that he has been leaning on a broken reed, and that, at best, it only obscures and masks the real cause of the mischief. Two cases will be sufficient, out of many, to illustrate not only the possibility of recovery from this distressing malady, without the use of alcoholic compounds, but also to demonstrate the fact, that a considerable amount of comfort, and the absence of nervous irritability follow the avoidance of stimulants in these complaints.

CASE I.—A highly-accomplished young gentleman, with a healthy constitution, but a delicate organisation, possessing great intelligence, considerable mental capacity and many personal attractions, had, from early domestic affliction, and the consequent emotional trials and mental conflicts, suffered severely, for several years, from a disordered stomach, which culminated not infrequently in nervous exhaustion. Enjoying ample means, no opportunity was neglected to bring relief and consolation, and the best medical advice was sought whenever it was deemed advisable. There appeared to be no difficulty whatever in suggesting the proper mode of treatment. The friends of the patient, and the medical men in attendance at different times, were always unanimous—"he must have plenty of support." The nervous depression, as every one knew, could never be removed until the *physique* was improved. It was also a well-known fact, that whenever the human body is "below par," the nervous system runs riot; it was clear, therefore, that the bodily strength must be kept up. So far, so good; but the treatment! It was pretty nearly the same throughout. Flesh meat three times a day, and that underdone; three or four glasses of "good old port" a day, or a little brandy and water, or else champagne, according to the urgency of the symptoms. These, it was said, *must* be taken, whether the appetite demanded them or not. The treatment was tried for several years without success, and no wonder! It would be just as sensible to attempt to mend a watch with a crowbar, as to give the ordinary diet of a fox-hunting squire to a sensitive, delicately-constructed individual as the one described, particularly when out of health. The nerves became unstrung, and anything in the shape of the ordinary exertion or excitement of every-day life brought on complete depression, sleeplessness, vomiting, and a host of disagreeable sensations.

In these cases even champagne does harm, and seldom serves a good purpose; the evil it causes, by taking away what remains of self-control, outweighs any temporary benefit it sometimes gives, by acting as a sedative to the stomach, and arresting the vomiting. At this stage I was consulted. I advised the discontinuance of the treatment which had failed, and the substitution of a bland, nutritious diet—milk and bread, in various forms, to constitute the principal food, and whenever prostration occurred after excitement, milk and water only, combined with absolute rest and quietude. The disuse of stimulants of course was recommended, although they had only been taken conscientiously as medicines by the patient, who had no liking for them. The effects of the change soon became manifest in the gradual improvement of all the symptoms, but the difficulties to contend with were immense, and nothing but the good sense and determination of the patient to give it a fair trial would have carried out the regimen. At this period he wrote as follows:—“My friends at home begin to think your treatment is not bringing my system to a healthy standard, and until that point is gained, I cannot possibly expect strength. They urge me more than ever to try stimulants again, but I have come to the conclusion that I will give *self-denial* a fair chance—say another year after this—for it is evident to me that I must at present practise much self-denial to keep at all well.” I am happy to say he persevered with the rules laid down for his guidance for many months, taking meat once a day after a time, and eventually had the satisfaction of enjoying a degree of tranquillity, to which he had for years been a stranger, and sleep as calm and refreshing as that of infancy. His restoration to a better state of health than he had known for years was an accomplished fact, notwithstanding the treatment, which his friends had stigmatised as “lowering,” “reducing,” “poor,” “meagre,” and so forth. He was able to report, ultimately:—“Sincerely do I assure you I have often thanked you for all the good you have done me. No one has ever benefited me one quarter to the extent you have, and if I felt sometimes that you were rather hard upon me—that I never could persevere in the battle all alone, nor continue your directions without a word of encouragement from any one—I have found in the long run that you were always right.”

CASE II.—A middle-aged gentleman of highly nervous temperament, well educated, intelligent, and of good social position, had endured the torture of a weak stomach and super-sensitive nerves for years. He had tried all sorts of remedies, and regularly took small quantities of brandy by medical prescription, in addition to occasional draughts of malt liquor when the latter was deemed advisable. In consequence of observing the sad effects

of the recommendation of stimulants to a dear and attached relative similarly affected to himself (who subsequently succumbed to their influence, which at last became irresistible), he was filled with horror at the prospect before him, and fell into the greatest despondency, regarding his case as hopeless. Entire want of appetite, irritable stomach, disordered bowels, profound melancholy, nervous prostration, and general debility, made up the sum of his miserable condition. He hailed with delight the assurance that stimulants in his case were the greatest obstacles to his ultimate recovery, and seemed surprised to learn that they were useless for "strengthening" purposes, when he had been led to believe he must almost depend upon them so long as he could not take much food. He discarded them accordingly and followed out the plan proposed to him, with a more substantial improvement in a few months than I anticipated. He was in a position to volunteer the following cheering statement:—"Pray do not think my silence ungrateful, but place it to my lacking 'the pen of a ready writer,' and a nervous dislike to it in nine cases out of ten. I have every reason to be most thankful for general improvement in health and gradual increase of strength—indeed I may say I feel quite a different creature to what I was before the adoption of your advice and diet system, and am conscious I owe you a debt of gratitude which nothing I write can fully express. I am still adhering to the milk diet, which agrees with me so well that I have no wish to change, deserving no praise for self-denial. My appetite is really good, sleep now seldom disturbed by distress or wakefulness, and the weight and oppression of spirits I found so trying is, I trust, gradually departing. I now take quite an interest and pleasure in household matters, and but for failing sight would busy myself more with reading and writing. You will think I am nearly off the invalid list, and only require your certificate to believe myself cured!"

The above-mentioned are good representative cases, and reflect the conditions of hundreds. The entire medical treatment is not given, because it is obvious that the great secret of success was in the withdrawal of the alcoholic remedies so unwisely insisted upon by previous advisers, and the patient use of such a kind of diet as the overtaxed and weakened stomach could easily digest.

H.



## Miscellaneous Communications.

### DOCTORS AND WATER DRINKERS.

(From the *British Medical Journal*, June 4th, 1870.)

THE position at present occupied by the British profession in reference to the debated usefulness of alcoholic articles of diet is one which greatly puzzles the advocates of their disuse. The social movement in favour of water-drinking has been steadily pushed on for nearly forty years; and, although it has not achieved the rapid and wide-spread success which once seemed probable, there is no doubt that it is now taking strong hold of all classes of moral reformers. Men of all shades of religious opinion are beginning to acknowledge that natural maladies must be met by natural remedies; and thus, in the midst of a zeal for the general benefit of mankind more genuine and wide-spread than was perhaps ever known before, it is not surprising that there is a universal acquiescence in the paramount necessity for a large reform in our drinking customs. The results of these customs are encountered by the missionary, whether religious or secular, at every turn in his work. Visit the physicians' wards at a hospital; sit by the side of a magistrate at petty session; walk through the poorer streets of any British town on Saturday night; examine the registers of prisons, workhouses, and lunatic asylums; converse with working clergymen and sisters of charity; take your evidence, indeed, where you like, you will have the same fact forced upon you—that prominent amongst the causes of human misery, in all its legion forms, is DRINK. We are fighting a fierce battle in the hope of reducing the disease which springs from the vice of prostitution; but, compared with the gin-palace, as a source of physical and moral evil, the brothel is simply nowhere. Were all true of syphilis which Dr. Chapman has asserted, and which Mr. Berkeley

Hill's statistics might seem to imply, alcohol, would still, as a cause of disease and death, tower as a giant over its puny rival.

In the face of such general facts as we have hinted at, the medical profession maintains a curiously impassive attitude. Some one hundred and thirty of our senators have, we believe, voted in favour of the Permissive Bill (for the control of the traffic), yet we doubt whether the names of a hundred medical men are enrolled in the lists of its supporters. The clergy of all denominations—the guardians of our spiritual health—have recently joined the movement in numbers; but from the conservators of our physical well-being there comes little but passive resistance. The number of medical men who at present take an active share in the advocacy of water-drinking might be counted easily on the fingers. We have the excellent and consistent veteran, Mr. Higginbottom, of Nottingham; Dr. Munro, of Hull; Dr. Edmunds, of London; and a few others, as highly esteemed, but less widely known; and the list is done. Dr. Beaumont, Dr. Fothergill of Darlington, and Professor Miller of Edinburgh, its champions in the past, are gone from us; and the name of Sir John Forbes, who late in life espoused its advocacy, must unfortunately be mentioned in the same list. In the United States, matters are, we believe, in much the same position; whilst on the Continent there has been, as yet, comparatively little discussion. Now, the medical profession of our own country alone numbers sixteen thousand; and those who compose it are men who have been educated in very various schools—men of very differing brain-capacities and unequal degrees of conscience-tension, but who are one and

all familiar with the secrets of social life, and with the details of health and disease. Such a body might surely have been expected to be, if not foremost in connection with such a work, at any rate contributing a fair quota of its supporters; and in point of fact, before the days of abstinence, the cause of temperance did actually find its main advocates amongst members of the medical profession. It has notoriously been otherwise as regards water-drinking. Although from time to time leading members of our craft have taken up its advocacy, the main body of the profession has stood apart, and perhaps never did so with such a close approach to unanimity as at the present time.

It is not to be concealed that our modern water-drinkers regard this position on the part of the medical profession with undisguised astonishment. "Are you all asleep?" they ask. "Do you not know what has been going on during the last half century? Are you not aware that one of the most vital changes in human habits that has been proposed since the days of Noah is making steady progress; and that it must certainly be largely influential for good or evil on the public health? Are you willing to keep aloof in such a movement, giving no verdict upon it but that of silence? Do you not remember that we consulted you in the beginning; and that your leaders, headed by Brodie himself, certified without reserve that intoxicating drinks were not necessary to those in health? Since then, have not many of your leading physiologists and chemists expressed strong theoretical opinions adverse to the dietetic employment of alcohol? Is there one amongst you who has not seen the experiment of habitual water-drinking tried under his nose, and who has not observed that the families of his abstaining patients are just as healthy as others? Those of you who prefer aggregate facts to single ones must surely have watched with great interest the experiment made by the 'Temperance Provident' Insurance Company, which, dividing its insured into two classes,

the water-drinkers and those who use alcohol, finds each year that the mortality amongst the former is less than that of the others, and less than that expected from all former calculations. Have you not read the testimony of travellers in all climates, of sailors exposed to all kinds of hardship, and of artisans accustomed to the most laborious work, all uniting in the assertion that they can get on better without stimulants than with them? And how, in the face of such facts, which to us seem as clear as the sun at midday, can you, the guardians of the nation's health, stand opinionless in the matter, or even act in opposition to the plain results of experience? It is to you that the delay in the realisation of our hopes is mainly due; and, to speak candidly, we cannot understand your reasons."

The water-drinker, who chances to be also a medical man, has a few other questions to put to his beer-drinking *confrère*. He may ask quite fairly, after a short running *résumé* of well admitted facts as to delirium tremens, various acute diseases, and as to the common cause of our worst accidents, &c., whether Dr. Garrod's opinion as to the invariable paternity of gout is not probably true; next, whether the gouty diathesis is not very hereditary; and whether there are not, in all probability, a host of maladies associated with it which do not gain its name. Is it not likely, he may ask, that the strictly temperate drinkers of wine and beer—those with whom they seem to agree best—are really slowly and insidiously increasing for themselves and their descendants that arthritic dyscrasia which they have already inherited, to which so much chronic disease is traceable? He will further urge, that the more pathology advances, the more definite becomes the proof which connects chronic diseases of the liver and kidneys, degenerations of arteries and of nerves, and, indeed, of the tissues generally, with the use of alcohol.

We have stated in the preceding sentences, as clearly as we have known how, the kind of arguments

which well-informed water-drinkers address to our profession. We will now make the best apology we can for the apparently absurd position in which we ourselves stand. It may be urged, in the first place, that we are not the advisers of the community in mass, but of individuals. The question has never been put to the sixteen thousand British doctors, "Are you of opinion that the general health would be hurt or helped by the universal abandonment of alcohol as a beverage?" If such a query were possible, the profession, before taking upon itself the grave responsibility of reply, might well examine such evidence as that of the Insurance Company just quoted, and would find it in every respect applicable. The question as to whether general total abstinence would be better than indiscriminate use is by no means the same as the inquiry as to whether carefully adjusted moderation may not, after all, be the best of the three plans. A medical man has no right to give to an individual patient advice based, not on what is supposed good for his individual case, but for the aggregate. He has to act on the supposition that his patient will be temperate. The Insurance Society contrast is clearly between a group of abstainers and another group, not of temperate men, but of those of mixed habits, probably with a fair sprinkling of drunkards. The averages thus obtained are not trustworthy in application to individuals. Having disposed of this statistical fact, which at first sight might have seemed conclusively in favour of abstinence as contrasted with temperance, we might next suggest that the remarkable unanimity of the profession must excite our suspicions as to the soundness of some of the other arguments, and must lead us to suppose that there is something under the apparent success of abstinence which is not quite so satisfactory as some would have us think. It is not possible that the whole profession, with the exception of a dozen, is swayed by self-interest (even if such a motive exists at all in this case), or is influenced in its decision

either by caprice or by personal wishes. Amongst us there are the average numbers of crotchety men; of men of scrupulous conscience; of men zealous in philanthropy; and from amongst these abstainers would certainly have sprung if it were not that special difficulties exist. The mere fact that surgeons have not, in large numbers, become water-drinkers, must, considering the long period during which the question has been debated, be allowed to count for something, however much facts may seem to preponderate on the other side.

Medical men have watched the health of their abstaining patients, and have failed to be convinced that water-drinking is best; for, if they had, they would have adopted it themselves, and would have urged it on others. Probably almost every member of the profession in the three kingdoms himself uses dietetic stimulants, in bold defiance of gout and tissue-degeneration; and honestly believes himself, on the whole, the gainer from them. In the case of the more philanthropic, the belief in the gain must be very strong, otherwise it would not outweigh the moral argument for disuse. We may take it as a fact, that to medical on-lookers the results of the water-drinking experiment have scarcely been satisfactory. Nor do the impressions which they have formed differ from those of the bulk of the community, as illustrated by their actions. A man of forty, not being a fool, is almost as competent as a physician to determine a question of his own daily dietetics. He knows from detailed experience what on the whole agrees with his health, and what does not; and it is, for the most part, only as regards very distant results, that he need seek medical advice as to his food. Now, the opinions formed by these rough and ready observers of themselves and others, after opportunities more or less extensive for noting the results of water-drinking, are decidedly in favour of the moderate use of stimulants. Many have tried both plans; and it might perhaps not be an unfair estimate, that the number of those who

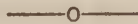
have been abstainers and are, solely out of regard for health, no longer such, at least equals that of those who remain firm. Thus the facts which a surgeon might collect by inquiring amongst his friends would be by no means unanimous, and in many instances might be strongly adverse to exclusive water-drinking. The chemical and physiological evidence is held at a low value by the physician, whose duty is to ascertain the truth as shown by experience and not by speculation. Whether alcohol is or is not "a food," he does not care much. He does not believe that fire-warmth is "food," but he knows that it is better for a man's appetite and digestion that he should dine in a warm room than a chilly one. He may even have deliberately abandoned all notion of the use of alcohol as food, and may believe simply that it is valuable in its power of equalising the circulation, of removing for the time sources of local discomfort, and thus placing the system in a state which gives the viscera a fair chance. In respect to the evidence of improved health under certain special conditions and as to the proved power of endurance of fatigue on the part of water-drinkers, he is compelled to answer that it does not apply very closely to the circumstances of those who seek his counsel. His clients are the city clerk, the student, the shopkeeper, the artisan, the poor woman living in close rooms and surrounded by a large family. They know as well as he does that rest of mind and body, change of air, residence in the country, and plenty of out-door exercise are what they really need in order to secure vigorous health. For him to prescribe such remedies to them would be little better than mockery. They ask him whether, having regard to all circumstances, he thinks them more likely to be able to bear up under the ills of life, to be able in the long run to discharge their duties to others with comfort to themselves with or without the daily modicum of beer. They do not seek from him an opinion based on moral considerations, but one which shall

regard solely those of health. Of the rest they are their own judges. The medical man who allows his belief in the moral gain which would result from general abstinence to modify the opinion which he expresses to one who consults him on account of his health acts dishonestly, however excellent may be his motive. He has no right whatever to prejudice the interests of an individual for the sake of good to the community. Here, indeed, is the real stumbling-block. Non-medical water-drinkers may hold what opinions they like, and express them at pleasure. They are not paid to study the subject and to give sound advice, nor do their opinions carry any authority beyond that derived from such facts as they may be able to quote. It is quite open to them to express opinions which may be true of the average, and not true of the individual, but to the medical man this is not permitted for a moment. Again, a surgeon, zealous for the moral reform even to the extent of willingness to make some sacrifice of health considerations, is, if he have misgivings on the latter point, almost certain to lose faith in the practicability of a water-drinking reform. If, he argues, it be really true that a third of the dwellers in cities, for example, are better and not worse for taking beer in moderation, then whatever I and the rest of the profession may try to persuade them, they will find out the fact, and the greater part of them will continue the habit. It is only the real believer in his creed who can heartily advocate it; and it is undeniable, as regards the medical profession, that whatever may be the ardent wishes of the more thoughtful amongst us, it entertains no real belief that water-drinking is universally advantageous to health.

There are many other points to which we should much have liked to advert; but enough has, we trust, been said to prove that the water-drinking movement is entering upon a new phase, and that it has claims of the most cogent character upon the attention of medical men. Its advocates are putting aside very gene-

rally many of the old and untrustworthy arguments formerly in use. We shall probably in future hear but little of ingenious attempts to prove that all good Hebrews were teetotalers, and that the wine which was spoken of approvingly in the Bible was always a non-intoxicating fluid. Absurd attempts to show that alcohol is not "food," and therefore must be hurtful, will vanish in the light of common sense, and with it the sister crotchet that alcohol is always a "poison," and therefore always hurtful. We shall not be asked to decide whether it is or is not "a good creature of God;" nor will any, excepting a few who, with Professor Erasmus Wilson, believe in the "fashioning of our food by the hand of the Almighty," see any argument against its use, in the fact that we do not find it anywhere ready-made. Its friends and its foes will meet on the common ground of a reverential belief that all nature and all the possibilities of nature are God's work, and that to the divinely-endowed human intellect are committed the tasks of discovery, invention, estimation, and final choice. If the Jews did drink a spirituous wine, it is no reason why we should continue to do so if it gives us gout, hurts our health, or imperils our souls. If the term "food" be defined ever so accurately, and alcohol be excluded from it, it is still no reason why I should not take it if I find on trial that it does me good. The fact that large quantities are most injurious, proves no more against small ones than does the frightful result of a conflagration imply the propriety of denying oneself the genial warmth of

a domestic fire. The time is coming when these plain truths will be admitted by everybody, and when we shall discuss the question as one which in its nature admits of no *à priori* or theoretic decision, but which can alone be set at rest by the honest and passionless employment of the light of experience. We beg to warn the advocates of water-drinking against claptrap and hurry. They have a strong cause, and even if they had not, it could not be permanently aided by resort to exaggeration. The reformation at which they aim is one of such noble proportions that it may well take several generations to accomplish it. They may rest assured that the work they have begun can never be lost, and that any attempt to gather fruit prematurely will result only in disappointment. Upon members of our own profession we would earnestly urge our conviction that, in reference to the health of the community, the use and abuse of alcohol takes precedence in importance of all other sanitary questions. The more it is examined, the wider is its range found to be. We owe it alike to ourselves and our employers to investigate every obtainable fact respecting it with the utmost care. We owe it in a yet stronger sense to our own consciences, whilst the question is still *sub judice*, to guard most scrupulously the terms in which we recommend alcoholic remedies to our patients. In many instances, it is very possible that the physical good to be obtained is trivially small, and weighs not as a feather against the moral evil which may result from our too thoughtless advice.



## INEBRIATE ASYLUMS IN THE UNITED STATES.

(From the *Medical Times and Gazette*.)

### I.

RATHER more than a year has now elapsed since a very remarkable article appeared in an American journal (the *Atlantic Monthly*) entitled "Inebriate

Asylums and a Visit to One." Until we read that article we must plead guilty to having been totally ignorant of the very existence of such a man as Dr. Albert Day. And yet, if the state-

ments therein contained were to be depended on, we felt that we were reading the history of a man whose name will be indelibly recorded in the annals of Medical science. Knowing the tendency which many of our Transatlantic friends have of magnifying the virtues of their heroes, we resolved not to act hastily, and to postpone bringing Dr. Albert Day's marvellous history before our readers without some further and corroborative testimony. This testimony we have at length obtained in the form of several annual reports of the Washingtonian Home, of which Dr. Day was superintendent for about nine years, and of the New York State Inebriate Asylum, to which Dr. Day was promoted in the spring of 1867. These Reports, drawn up by Dr. Day himself, although written in the most modest and unassuming style, fully bear out the statements contained by the writer in the *Atlantic Monthly*; and hence, after noticing our hero's early history, we shall proceed to discuss the nature of his labours and the success with which they have been crowned. In thus bringing prominently forward Dr. Day's claims to the gratitude of drunkards generally, we must guard ourselves against being supposed to ignore the labours of Skae, Peddie, Christison, and other British Physicians in the same direction; and we heartily trust that our *confrère's* success on the other side of the Atlantic may serve to stimulate us at home to follow in his steps. The few details we shall proceed to give regarding Albert Day's early life are taken from the *Atlantic Monthly*. When he was born we are not informed; and all we know of his early life is this—that his father was a farmer in the State of Maine, where drunkenness was then fearfully prevalent, and that when he became an orphan at the age of thirteen he tied all his worldly goods into a bundle and walked to a farmer's house some miles distant, to whom he addressed the plain question, "Do you want to hire a boy?" The farmer accepted his services, and from hoeing corn and chopping wood the boy advanced to an

apprenticeship to a mechanical trade, was moderately prosperous, married early, and soon obtained a seat in the Legislature of Massachusetts. He is one of the few persons now living who never tasted an alcoholic drink; and from the age of sixteen he was a staunch teetotaler, and was known wherever he lived as possessing a singular pity for drunkards, and as a firm believer that, with timely and judicious assistance, a majority of them might be restored to self-control. We regret that we cannot find space for the graphic account given by the writer in the *Atlantic Monthly* of Albert Day's experience with his first patient, an apparently hopeless sot, named Jack Watts, who was "dead beat" by the extreme civility of his friendly neighbour and the practical help which was afforded him. Jack Watts never drank again, and died a few years ago without a single relapse. This case made an indelible impression on Day's mind. When he was residing at Boston in the exercise of his trade, he took an active part in originating a home for drunkards in that city, and when, in 1857, the Washingtonian Home was opened, he took the post of Superintendent because no one else seemed capable of discharging the duties of the office. He now very wisely studied Medicine in Harvard University, and in due time obtained his degree of M.D. After nine years' service at the Washingtonian Home, he was transferred in May, 1867, to the Binghamton Asylum in the State of New York.

Regarding his success in the Washingtonian Home, we will content ourselves with extracting the following quotation from Dr. Day's report for the year 1866, the last complete year of his residence in that institution:—

"When we commenced our work our institution stood alone, as the representative of our peculiar department of Christian philanthropy. So far as we know, we are the first institution ever started expressly for this work.

"We had no record of past experiences of other institutions, or the

efforts of other men in this direction to warn or guide us by their failures or successes, and our treatment was therefore at first somewhat empirical, and the experience upon which all effort should be properly based was necessarily the result of our own experimental observation.

"It is, then, but fair to suppose that the result of our constantly increasing experience, together with the more liberal appliances that the beneficence of the commonwealth has enabled us to use, would result in more judicious and skilful treatment, and thus the consequent chances of recovery in individual cases be improved. This, I am sure, is the case, and I can say with confidence that we have learned much in the proper application of Medical science to the treatment of this disease, and the beneficial results of our enlarged experience and more liberal views are plainly visible to me in hundreds of cases that lie under my constant observation.

"Since my connection with the 'Home' (about nine years), there have been registered as admitted under its care the names of twenty-three hundred patients. Of this number four hundred and ten have suffered from the various forms of mania known under the general name of delirium tremens. Twenty-seven inmates of the 'Home' have died during this time, a large proportion of these deaths being caused by consumption, pneumonia, and other diseases aggravated by intemperance. Of course it is impossible to estimate with any degree of accuracy the proportion of this number who have been completely reformed. Many are dead, and hundreds are scattered all over the country, or have passed from under my observation. But it is safe to say that a majority have remained firm to their determination formed while with us, while a much larger proportion have had their condition alleviated, with hopes of eventual and permanent cure.

"It will thus be seen that our instrumentality has been the active agent in the cure and reformation of

many hundreds, that the amount of sickness under our care has been very large, and of every variety of form that inebriety can induce, and with fatal results much smaller than has usually been thought possible in the treatment of delirium tremens. It will be found, I have no doubt, that there is no other institution in the United States, either organised expressly for the treatment of inebriety, or treating it incidentally with other diseases, that can show a record at all compared to this, either in the number of patients or the success attending their treatment."

Amongst the various topics referred to in this, his last *Washingtonian* report, are the limited capacity of the buildings generally, and especially the total lack of accommodation for such patients as require more restraint than the majority of patients demand, and his regret that there are no similar homes for ladies who in large numbers, and representing every phase of social life, are the victims of an insatiable appetite for stimulants in various forms—generally either opium or liquor—and who require the seclusion and treatment of an institution like the *Washingtonian Home*.

The following statistics are by no means devoid of interest. There were admitted into the Home during the year ending December 31, 1866, 349 cases, of whom there returned for the second time 34, for the third time 18, for the fourth time 6, and for the fifth time 2. There are now doing well and apparently reformed 215, while 65 are greatly improved, and 9 are incurable and unfit to be at large. The average number of days each patient remained was 27, and the average cost was 37 dollars 13 cents. We may mention that the State votes an annual grant of 5,500 dollars to this institution. Amongst those admitted during the year 1866 were 56 merchants, 68 clerks, 8 lawyers, 6 physicians, 3 clergymen, 11 printers, 4 actors, and 2 chemists, the balance comprising artists, mechanics of every kind, and common day-labourers.

We think it probable, from a paragraph in the last page of his interest-

ing report, that Dr. Day had a prophetic suspicion of his early removal to the larger sphere, into which we shall follow him in our next article. "It is a pleasant thought," he observes, "that, while ours is the pioneer institution in this important work, other institutions are like to be modelled from it. I have been consulted several times of late by gentlemen from other and distant cities, who contemplate a work among their own communities to be based substantially on our plan. In thus contributing of our efforts and experience to other States, we may truly feel that we are sustaining the well-earned reputation of our own Commonwealth as a pioneer and example of every good work."

In concluding the present article we may observe that in addition to the Washingtonian Home at Boston, which we have just described, there are three other inebriate asylums in the United States—namely, the Sanatorium in Media, near Philadelphia, opened in 1867; a retreat at Chicago, opened in 1868; and the one at Binghamton, called the New York Inebriate Asylum, which was nominally founded in 1858, but had no real existence until Dr. Day was appointed its superintendent in the spring of 1867. In our next article we shall give a description of the mode in which this establishment is conducted.

## II.

In our preceding article on this subject, we traced the progress of the Washingtonian Home during the period of Dr. Day's superintendence. On May 1, 1867, he was appointed to a larger sphere of usefulness as superintendent of the New York Inebriate Asylum at Binghamton. When Dr. Day entered upon his duties, the asylum was without inmates, and almost without friends. Five patients, whom he brought with him from Boston, constituted the whole list of patients; and yet, only twenty months afterwards, in his report for the year 1868, he is able to write, "Since then,

those who have come and gone, with more or less happy results, number three hundred and ten, of whom eighty-two are with us to-day; and the roll of present inmates is rapidly increasing."

Sympathising with Mr. Dalrymple as we do in his general views, although not feeling able to support him in his opinion that the Legislature should interfere with drunkards, let us commend to him and to his supporters the following extract from Dr. Day's last report:—

"Amongst the various causes which directly tend to swell our roll of patients and *protégés*, none have operated with more immediate and substantial influence than the sudden and vigorous impulse recently imparted to public opinion in this matter of inebriate reform, by the lively agitation of the subject through the medium of magazines, newspapers, and public lectures. By thoughtful and well-digested papers, logically conceived and forcibly expressed, those periodicals and journals, which may be justly regarded as the discreet exponents of public opinion, have supported our views, cheered our hearts, and strengthened our hands. The benefits derived from the article in the *Atlantic Monthly* are gratefully acknowledged. It had the effect of bringing to the asylum a number of our most interesting and hopeful cases. From Ohio, from Indiana, from Illinois, from Michigan, Missouri, North Carolina, and Mississippi, we have received patients, who attributed to that paper, or to newspaper notices of it, either their first joyful knowledge of the rescue at hand for them, or confirmation in a previously conceived, but wavering, inclination to avail themselves of the way of escape and the protection we afforded them."

Dr. Day is totally at issue with Mr. Dalrymple as to the expediency of legislative interference:—

"To receive within our walls the forced commitments of a court, or the common seizures of the police, is at once to impair, if not destroy, the philosophical value of the experiment, and, what is worse, to embarrass the

discipline and lower the moral tone of our probationary household."

He must, however, be occasionally troubled with patients of this class, for in the "Rules and Regulations" we find three classes of patients described—viz. *free patients*, who (or whose friends) must give proof that they cannot afford to pay for their support; *paying patients*; and *committed patients*, whose nature is best explained by the following extract from an Act passed in March, 1865;—

"§ 4. Any justice of the Supreme Court, or the county judge of the county in which any inebriate may reside, shall have power to commit such inebriate to the New York State Inebriate Asylum, upon the production and filing of an affidavit or affidavits by two respectable practising (*sic*) Physicians and two respectable citizens, freeholders of such county, to the effect that such inebriate is lost to self-control, unable, from such inebriation, to attend to business, or is thereby dangerous to remain at large. But such commitment shall be only until the examination now provided by law shall have been held, and in no case for a longer period than one year."

The patients belonging to the free and paying classes voluntarily submit themselves for a period more or less protracted, from three months to a year, according to the nature of the individual case, to an isolation which the medical officers study to render agreeable, and a restraint of the mildest available nature; and we should be glad to see some such system as this introduced into this country. Putting the committed class out of the question, we may observe that, as a general rule, the applicants for admission, when they enter the office of the asylum are accompanied generally by a relative or a friend. Some reach the building far gone in intoxication, having indulged in one last farewell debauch, or having drank a bottle of whisky for the purpose of screwing their courage to the sticking-point of entering the asylum. Sometimes the accompanying friend, out

of an absurd kind of pity for a poor fellow about to be deprived of his solace, will rather encourage him to drink; and often the relatives of an inebriate can only get him into the institution by keeping him intoxicated until he is under its roof. Frequently men arrive emaciated and worn out from weeks or months of hard drinking, and occasionally a man will be brought in suffering from delirium tremens, who will require restraint and watching for several days. Some enter the office in terror, expecting to be immediately led away by a turnkey and locked up. All come with bodies diseased and minds demoralised; for the presence of alcohol in the system lowers the tone of the whole man, body and soul, strengthening every evil tendency, and weakening every good one.

"The newcomer subscribes to the rules, pays his board three months in advance, and surrenders all the rest of his money. The paying in advance is a good thing; it is like paying your passage on going on board ship; the voyager has no care, and nothing to think of but the proposed object. It is also one more inducement to remain until other motives gain strength."

Some years ago Dr. Day made the important discovery (not, we fear, as yet recognised in this country), that it is easier for a confirmed drunkard to cease at once and totally from alcohol than to diminish his quantity gradually. By total abstinence the patient not only suffers less, but for a shorter time, than by the "tapering off" system.\* The visitor to the

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\* We heard the following anecdote related at a medical party in Scotland, but cannot vouch for the truth of the story:—A gentleman was travelling in the Isle of X., and, being benighted, sought, and we need not say, obtained, hospitality at a refuge for drunkards, in the heart of that island. On proceeding on his tour the following morning, his host proposed that, as the path was not clear and there was a chance of a fog, two or three of the inmates should accompany him for a few miles. They proved most pleasant com-

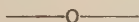
Binghampton Asylum gives us some valuable information on this point. A clergyman for more than two years before entering the asylum drank a quart of brandy daily, and felt sure that he would die if he should suddenly cease. He entered the office at 11 a.m., after having drunk twelve glasses of brandy, and intended to return to his hotel to enjoy a last debauch; but Dr. Day quietly objected to his return, sent for his trunk, and cut off his brandy at once and totally. For forty-eight hours there was incessant craving for his accustomed stimulant, and he could only obtain sleep by the assistance of bromide of potassium; but on the third day the craving ceased, and he never felt it again. Other patients stated that they suffered a morbid craving for the first two or three weeks; but all agreed that the sudden discontinuance of the stimulant gave them less inconvenience than they had anticipated. Complete recovery, of course, is a slow and long effort of nature, but the improvement in the health, feelings, and appearance of patients after only a month's residence upon that breezy hill is very remarkable. This statement is fully borne out by the history of the visitor's first impression as he entered the beautifully laid-out grounds in which the asylum is situated. On a level space in front of the building he saw fifty or sixty well-dressed, well-looking gentlemen, of various ages, watching a number of young men playing a game at baseball. In general appearance they were so decidedly superior to the average of mortals that few visitors could fail

panions; but in the midst of a conversation, one of the speakers suddenly stopped, laid his hand on his stomach, and solemnly observed, "It is full time." There was a general pause, each patient pulled out his flask, took his *nip*, and replaced his treasure in his pocket. On inquiry, the astonished tourist was informed that, during the first month's residence, three *nips* were allowed daily; during the second two *nips* were permitted; and during the third, one; after which perfect abstinence was required.

to remark the fact. "Living up there in that keen pure air, and living in a rational manner, amusing themselves with games of ball, rowing, sailing, gardening, bowling, billiards, and gymnastic exercises, they are brown and robust;" and it did not, for a moment, occur to the visitor that "these serene and healthy-looking men could be the inmates of the asylum. The building, which has all the outward appearance of a spacious well-arranged hotel, is provided with all the means of in-door comfort and recreation. There is a billiard-room, a reading-room, a library, a conservatory, and a croquet-ground, and the apparatus of cricket is visible in one of the halls." The table is good and well served, and a stranger might be puzzled, after seeing all the arrangements, to know whether he was in an hotel or a college. Every Wednesday evening, after prayers, a kind of temperance meeting is held in the chapel. The inmates take part freely in the discussion which follows an address prepared by Dr. Day or one of themselves. The visitor heard one of these addresses, in which the superintendent enforced his three cardinal points—(1) No hope for an inebriate until he thoroughly distrusts the strength of his own resolution; (2) No hope for an inebriate except in total abstinence, as long as he lives, both in sickness and in health; and (3) Little hope for an inebriate unless he avoids, on system and on principle, the occasion of temptation, the places where liquor is sold, and the persons who will urge it on him. To illustrate the first of these points, he referred to a young man who, at the last meeting, after having been apparently quite cured, was about to return home. This young man delivered an eloquent address urging his companions to adhere to their resolution, and protesting his unalterable resolution never again to taste stimulants. He took his departure in the morning, and in a few hours afterwards he was found by a friend lying in the corner of a bar-room, dead drunk, and was returned to Binghampton within twelve hours.

We regret that our space will not allow us to draw more largely on this admirable article, and must conclude with expressing our sincere wish that it should be reprinted in this country in a cheap form, adapted to a wide

distribution. Its perusal by our legislators and men of influence would, we believe, rapidly promote the establishment of similar houses in England.



# CLERICAL FAILURES IN TOTAL ABSTINENCE.

By R. B. GRINDROD, M.D., LL.D., F.L.S., G.S., and R.G.S., *Author of "Bacchus," "Malvern Past and Present," "Hints and Cautions to Water Patients," &c.*

I PEN a few practical remarks, in pursuance of a promise made to a clerical friend, to explain my views in relation to a subject of mutual interest—the cause why not a few of the clergy have unsuccessfully tried the practice of Total Abstinence from alcoholic liquors.

I scarcely need to premise that my medical experience and convictions impel me to the belief that Total Abstinence, under ordinary circumstances, is right in principle and practice—that alcoholic liquors are not necessary to persons in health—that they are uncertain, and often unsafe, remedies in bodily weakness and in disease. Such were my convictions nearly forty years back, when I first publicly enunciated these views, and such are my convictions at the present period, after still more extended investigation and experience.

Why is it, then, that so many clergymen, after adopting the practice for a few weeks or months, are either induced or compelled, often under medical advice, to resort again to the use of wine and other alcoholic stimulants?

Many parties, I am afraid, give in their adhesion either under philanthropic impulse, or moral and religious conviction, and not in the persuasion that it is good, or even safe, for their health. Not a few clergymen, it is probable, sign the pledge under the conviction that they are countenancing a moral good, at the risk, or even penalty, of physical mischief—not sufficiently counting the cost.

A change of diet is almost certain

to involve a change of feelings—in this case those of apparent physical exhaustion; add to these the moral influence of entreaties and remonstrances of numerous kind friends who predicate certain mischief, and possibly, if not probably, the dictum of the doctor, and need we be surprised if the object of so much solicitude—only half convinced of the propriety of his new habit—should at last give way, and thus bring discredit on a good cause?

A brief review of the antecedents of not a few of the clergy who give their personal sanction and adhesion to the Temperance movement may assist in the elucidation of the subject. Possibly the possessor of a feeble constitution, he leaves school to commence his college career, a time necessarily, if conscientiously pursued, of self-denial and study. No sooner has his academic curriculum terminated than the course of study for holy orders begins, and this uninterruptedly until the period of ordination. Then, without any interval of rest, come the duties of a curate, and this in the full ardour of one devoted to his calling. Now follow claims of various kinds—sermon composition, a new and difficult study; parochial visitations, often exhausting to a sensitive mind; school and Bible classes or meetings, and other claims on the moral and intellectual being—and no wonder that times of mental weariness and bodily languor ensue, and medical advice should be sought. The only source of radical cure is obvious. The jaded, overworked horse would, under analogous circumstances, be sent to grass. The worn-out, broken-

down cleric, in whom the appeals of violated nature are signally manifest, is stimulated to renewed effort by tonics and wine. The contest is an unequal one—the human candle is being burnt at both ends—and the issue is not very doubtful.

What are we to do under these circumstances? is the very legitimate and natural question. Our health, and consequent ministerial usefulness, suffers, and surely we are not justified in incurring certain mischief for the sake of possible good.

The question is a just one, and demands careful consideration. In the first place, I would advise every clergyman, before signing the pledge, to do so in the full persuasion that the step is a right one—not merely for the sake of example, but right, or at least safe, in reference to his own health. If not assured of personal benefit, let him be convinced that he will not sustain personal injury. If an individual of weak frame or nervous temperament, let him quietly and unobtrusively try to abstain from alcoholic stimulants for a few months, and carefully test the effects. Let it, however, be done in such a way as not to call forth the anxious sympathy of wine-drinking friends, who are almost certain to predict evil. The influence of constant dubious references and mournful prognostications on persons of nervous temperaments may be readily surmised. He must indeed have more than ordinary moral strength who can withstand the daily remonstrances and entreaties of a united congregation, supported, as it often is, by medical advice.

Let me now suppose that a clergyman resolves, after due consideration, to give the principle of Total Abstinence a trial. Let it, however, be a *fair* trial, and let him thoroughly understand that a change of habit in one respect may demand a change of habit in another. Wine-drinking is a habit of artificial life, and commonly indulged in to support artificial habits. Water-drinking is a practice of nature, and requires obedience in other respects to nature's laws. He

who desires to possess real health—and not merely its appearance—must observe the rules of health. The laws of the animal economy are as fixed and absolute as those of the moral man, and every deviation from physiological integrity ensures its corresponding penalty.

Over-exertion, for example, mental or physical, is certain to be followed by mental or physical exhaustion. The capacity for bodily or mental exercise in each person has its limit, and this limit can be decided only in individual cases by the test of experience. If on occasional emergencies an excess of expenditure should be incurred, there should always succeed a period of adequate rest. Too frequently these periods of excessive mental or bodily expenditure succeed each other, and the hard-working clergyman endeavours by artificial stimulants to rouse into active exercise the flagging energies of body and mind.

It is obvious that a practice of this kind must eventually be disastrous. Stimulants do not repair the waste consequent on mental and physical labour—they do not contribute to the material supply of the lost organism on which the activities of the mind and body depend; they simply act as whips or spurs to the jaded animal.

The wine-drinking clergyman in many cases is worn out by stimulants as well as by over-exertion, and in the major portion of these cases the temporary excitement experienced by resorting to stimulants prevents the necessity of their having recourse to early and judicious rest—the only effectual and radical cure, it may be, in conjunction with appropriate medical remedies.

The overstrained clergyman, therefore, must learn the primary lesson that there is no royal road to recovery—that there are no means of restoring vital energy but those which involve obedience to physiological laws and requirements—that no artificial stimulants can form adequate substitutes for the stimulants of nature—that the only permanent cure lies, on the one hand, in absolute rest

of organs overworked, and, on the other, in the due exercise of organs which have been neglected—in short, in those conditions of air, exercise, and social influences which will calm and tranquillise the brain and build up the vital energies.

Among the more natural stimulants or restoratives is pure air, and this is the more important because clerical studies and clerical duties too frequently involve respiration in an atmosphere either deficient in oxygen or pregnant with noxious elements. How often, when the system languishes for want of pure air, the nerves are roused from the torpor of exhaustion by the stimulus of wine? The influence is purely temporary. Hence the sufferer must learn a second lesson, that alcohol is not a substitute for oxygen, and that pure air is essential to pure blood and sound nerves. He must counteract the influence of library, school, church, or other indoor exposure, by abundant outdoor exercise.

Systematic labour forms another point of essential consideration. Many clergymen too commonly crowd the more laborious labour of the head into a too limited period of time. If, for example, sermon composition is left until the latter portion of the week—the freely-worked brain has not had time to recover tone before it is again urged to exertion by the claims of the Sabbath. Then follows corresponding exhaustion, and that “Mondayish” feeling which not unfrequently seeks for relief by recourse to stimulants. A wise plan is to execute headwork during the middle portion of the week, and, as an invariable rule, to let Saturday be a day of mental rest and abundant bodily exercise. This would prevent two consecutive days of mental pressure and nervous exhaustion.

Again, a clergyman, unless his strength should be manifestly commensurate, should avoid all extraneous work distinct from his pastoral duties. Public meetings of a purely secular character, dinners of various societies, involving brainwork, are not in any sense desirable, and add to labour already too exhaustive. Such meet-

ings may properly be left to laymen without at all involving a neglect of the cultivation of those social relations which should always be fostered between a clergyman and the members of his flock.

The regulation of diet constitutes another essential element in the preservation of health. The laws of diet I give at length in my little brochure, “Hints to Dyspeptics.” To preserve a healthy condition of the brain and nerves there must be ensured a healthy condition of the stomach. An eminent physician well remarks that “he who would have a clear head must have a clean stomach,” and few habits are more dangerous than to endeavour to rectify disorder of the stomach by the stimulus of wine. A common error in practice among clergymen is to abstain from solid food during the day, and at the conclusion of a hard day’s work to indulge in a comparatively heavy meal. The practice is in every sense unphilosophical. A heavy meal should not be taken late at night, and digestion should be completed before the period of sleep. Again, an exhausted body is not in a condition favourable to digestion, and hence the desire and supposed necessity to stimulate by wine the flagging energies of the stomach. The same law applies to hearty indulgence in food at any time when the body is fatigued. The stomach in this state participates in the general debility, and is so far incapacitated from functional exercise. Under these circumstances wine may stimulate for a time to more vigorous action, but too often how sad the consequences—the remedy is worse than the disease!

Frequent dinner-parties are, on various grounds, a source of temptation and mischief. However careful the invited guest may be, it is scarcely possible to avoid indulgence in articles not of the most digestible character, and the invitations of the hospitable hosts cannot in every case be rejected. Apart from these considerations, there follows the late hour, and unfitness for ministerial work in the morning.

Skin action and brain action have intimate relationship. If by too close

mental exertion a large flow of blood is directed to the head, no more efficient mode of relief can be suggested than by free action of the cutaneous surface, which can readily be effected by well-directed ablutions, combined with vigorous towel-rubbing. In this way the overloaded brain is induced to part with its disproportionate share of blood, and the skin regains that supply of the vital fluid which by severe mental effort has been unduly directed to the brain.

My mind at this moment is directed to numerous cases of broken-down clergymen who, under judicious moderate hydropathic treatment, have been restored to health and usefulness, and who in vain have attempted to sustain ministerial labour by the use of non-natural stimulants.

Medical experience leads me to the conviction that, in the cases of clergymen who have abandoned the practice of Total Abstinence after a brief trial, most of them might have been prevented from doing so had they placed themselves for an adequate period under hydropathic treatment, and been subjected to those hygienic laws which can alone effect a radical and permanent cure. A few weeks devoted to a course of physical training, under medical supervision, would do infinitely more than any mere continental trip or holiday by the seaside. In such cases, what is wanted is not rest only, but the regulation of vital actions, the relief of irritable organs—organs irritable from excessive action, and resulting in debility—especially those of the brain and nervous system and the stomach and viscera of nutrition, and which require, in addition to rest, special medical appliances. This regulation of disturbed organs should precede any mere tourist excursion, which in such cases not unfrequently, by its incidental influences, does more harm than good.

To conclude my remarks, if a clergyman feels that his influence might be extended by personal adhesion to the

total abstinence movement, let him take into full consideration the responsibility of the step, and the serious influence of an early secession from the principle. Let him be aware of possible inconvenient contingencies. Let him know that he now must depend on the inherent energies of a body uninfluenced by artificial stimulants. Let him be prepared, by extra care, to avoid those conditions which arise, not from abstinence, but from neglect of hygienic rules. He will in this way soon discover that attention to the laws of health will more than compensate, even in present feeling, for the lack of alcoholic stimulus, and that the power of sustained endurance, bodily and intellectual, will be largely increased.

The failure in most of these cases arises, not from the disuse of wine, but from non-observance of laws necessary under any circumstances. Wine in such cases does not prevent mischief, but aggravates it. It may afford, for a time, apparent relief, but it only represses the manifestation of present mischief, and its use simply delays that more radical attention to means which alone can ensure a solid and permanent restoration.

A clergyman, seventy-two years of age—now under my care—lately came to me broken down by anxious and long-continued labour. He has been a total abstainer for nearly thirty years. It is remarkable—when compelled to seek rest and medical aid—to see how a system uninfluenced by the previous use of stimulants responds to the treatment administered. In a few weeks he looks many years younger, and in mind and body is regaining comparative health and vigour, and appears likely yet for some years to labour in the cause of religion.

I do not enlarge these remarks, but submit them to the consideration of the clergy, in my desire to aid a cause in which I feel a deep interest.—*Church of England Temperance Magazine.*

ASYLUM FOR INEBRIATES IN NOVA SCOTIA.

A COMMITTEE of the Legislative Council of Nova Scotia have reported to that body in favour of the establishment of an Asylum for Inebriates in that province. The following is a copy of the report:—

The Committee to whom were referred the petitions of the Diocesan Synod of Nova Scotia, of the Synod of the Presbyterian Church of the Lower Provinces of British North America, of the Baptist Convention of Nova Scotia, New Brunswick, and Prince Edward Island, and of the Grand Division of the Sons of Temperance of Nova Scotia, beg to report:

That the highly respectable sources from which these petitions have emanated should command the serious attention of this House to the subject to which they refer.

Independent of this, however, it must be admitted that when a fellow-being has so far yielded to the habit of intemperance as to become a confirmed drunkard, he is a subject who not only is entitled to the deepest sympathy and commiseration, but to some substantial aid also, in order to elevate him from the depths of degradation into which he has fallen.

The method prayed for and recommended by the petitioners for the accomplishment of this object is the establishment of an asylum for inebriates at the public expense. The committee being convinced that such an institution is of urgent necessity to many in this province, and that an appropriation from the public funds for such an object should be made, do earnestly recommend this House respectfully but strongly to urge upon the Government the necessity and propriety of taking some action in compliance with the prayer of the petitioners.

The committee regret that they have been unable to obtain any information either in regard to the method of conducting such institutions as asylums for inebriates, or as to their beneficial results, further than that contained in

the report which was laid upon the table of this House at its last session by the Government.

To the information and recommendations contained in that report, the committee beg to ask through this House the immediate attention of the Government.

All of which is respectfully submitted.

SAML. CREELMAN, *Chairman.*  
*Legislative Council Chamber,*  
*April 12th, 1870.*

Following is a copy of the document referred to in the foregoing report:—

*Communication relative to practical working of Asylums for Inebriates, and best means of obtaining same.*

*Halifax, April 26th, 1869.*

Sir,—Having been honoured by a request that we would furnish the Government with some information as to the practical working of asylums for inebriates, and the best means of maintaining and managing such an institution in this province, we beg leave respectfully to make the following statement of our views, and of the facts on which they are based.

The first inebriate asylum was established in Boston, Mass., and seems to have resulted from the temperance movement in that city. Many individuals who came forward to subscribe to the rules of the total abstinence societies were found to be so completely prostrated that they were not able to work, nor could they, in fact, find anything to do, as the public had lost all confidence in them; so hopeless and forlorn, therefore, was their condition, that most of them gave way to despondency and fell back into their former habits of intemperance. Benevolent persons, perceiving this, contributed the means for maintaining as many of such persons as they could; and it was found that after they had been thus supported for a short time they recovered their health, their shattered nervous system was repaired, their reformation became known, when

discharged they obtained employment, and in most cases became useful members of society.

The establishment which had been thus commenced was speedily enlarged and extended by private subscriptions and donations, and the State also contributed to its maintenance. It was called the Washingtonian Home, and we append the statistics for the year 1868.

The management appears to be very simple. The superintendent, being a judicious and experienced physician, as soon as a patient is introduced, addresses himself to the restoration of the deranged bodily organs, and proper attention is paid to his comfort and mental recreation. There is nothing compulsory in the system, except in cases of delirium, in which restraint is absolutely necessary; but this seldom occurs. Inebriates almost invariably desire to escape from the grasp of the tyrant who holds them in almost hopeless bondage, and most of the inmates of the asylum are persons who have taken voluntary refuge from their pitiless enemy. In other cases, the advice and influence of friends have doubtless been instrumental in inducing them to apply for admission.

It is found that the mutual encouragement given by the inmates to each other has a powerful effect in promoting their reform, and in fortifying them against the dangers arising from the influence of old habits.

There should, in our opinion, be no connection whatever between the institution under consideration and the asylum for lunatics, as the confounding of these two classes of sufferers might have a most injurious effect. The insanity of intemperance and ordinary lunacy are very different in character. A lunatic must always be regarded with distrust, but a person who has been emancipated from the power of habitual intemperance is looked upon with admiration. He is no longer considered a lunatic, but is acknowledged an exceedingly wise and fortunate man. There is this distinction between intemperance and all other offences—that while a man who has been guilty of any other degrading

vice or crime finds it very difficult to regain his reputation, the individual who has effectually overcome habitual intemperance has proved himself a hero, and is admired as a man of ten thousand, who has fought and conquered one of the most terrible enemies of human happiness.

The means of supporting such an institution constitute the most important point for consideration. It would of course be desirable that a building of suitable character and dimensions should be erected; but as there is nothing compulsory in the system, any building or buildings that could be procured for a few years, at a reasonable rate, might be taken for the purpose. It is our opinion that the asylum should be located in some healthy, pleasant, and easily accessible part of the country, and, if possible, in some place where no licences to sell liquor are granted, in order that the temptations which surround the inmates may be reduced to the smallest possible extent.

The Legislature will probably give an annual grant towards the maintenance of the institution, and private individuals would also contribute to its funds. The only suggestion we would make on this head is, that a legitimate method of providing for its support would be the imposition of a tax on liquor dealers. Ever since the trade in intoxicating liquors commenced, it has been an axiom of legislation that it ought to be controlled by the imposition of a special tax; but this tax has been uniformly laid on those whose business, being altogether retail, was least extensive and least profitable. If, of all trades, liquor-selling alone ought to be hampered by a special pecuniary exaction, there can be no reason why wholesale dealers, who almost invariably enrich themselves by their traffic, and who fill the main channels from which, by thousands of outlets, intemperance is contaminating our population, should not contribute a portion of their gains to neutralise the evils which they occasion. We therefore respectfully suggest that a tax of 20 dollars annually be imposed on every wholesale liquor dealer in the province,

to be expended in maintaining an asylum for inebriates. The money thus collected would itself be nearly sufficient to support such an institution, and as the expense would ultimately fall on the consumers of intoxicating liquors, from whose ranks alone the asylum would receive its patients, it could be regarded only as a just and reasonable insurance against the dangers to which that very large class of persons is exposed. We ought to add that the majority of persons applying for admission would be able to pay for their board and lodging and other necessary expenses.

The first asylum for inebriates should, in our opinion, be devoted solely to the reformation of males, as it would be both inconvenient and too expensive to receive and provide for both sexes at the inception of the undertaking.

The management of the institution should be under the direction of a committee, who would decide on the applications for admission, and exer-

cise a general control over the expenditure.

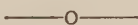
A medical man, possessing other necessary qualifications—such as a steady attachment to total abstinence principles, and an earnest desire to reclaim the erring and to comfort the miserable—would be the most efficient superintendent of such an asylum; but as medical aid can be easily procured when necessary, it is our opinion that, if a person in other respects eminently qualified for the office were to present himself, it would be unwise to reject him because he was not a physician.

Hoping that the Legislature may see fit to make the necessary provision for the establishment of an asylum for inebriates,

We have the honour to be, Sir,  
Your obedient servants,

CHARLES ROBSON,  
G. G. GRAY,  
PAT. MONAGHAN.

Hon. W. B. VAIL,  
*Provincial Secretary.*



## ALCOHOLIC EXPERIMENTS BY DR. PARKES.

At the Royal Society, May 19, a paper was read, entitled "On the Effects of Alcohol (*Ethyl Alcohol*) on the Human Body," by Dr. Parkes and Count Cyprian Wollowicz. The experiments given in detail by the authors were undertaken with a view of testing the physiological and especially the dietetic effects of alcohol, and to clear up some points left doubtful by previous observers. They were fortunate in obtaining as the subject of experiment a healthy and very intelligent soldier at twenty-eight, five feet six inches in height, weighing from 134lbs. to 136lbs., with a clean, smooth skin, a clear bright eye, good teeth, largely developed, powerful muscles, but little fat. As he had been accustomed to smoke, he was allowed half an ounce of tobacco daily, lest the deprivation of it might disturb his health. The amount of alcohol administered varied, but it was never

carried so far as to produce any extreme symptoms of narcotism.

The plan of observation was as follows:—For twenty-six days the man remained on a diet precisely similar as to food and times of meals in every respect, except that for the first eight days he took only water (in the shape of coffee, tea, and simple water); for the next six days he added to this diet rectified spirit, in such proportion that he took, in divided quantities, on the first day one fluid ounce (= 28 c. c.) of absolute alcohol; on the second day two fluid ounces; on the third day four ounces, and on the fifth and sixth days eight ounces on each day. He then returned to water for six days, and then for three days took on each day half a bottle (= 12 ounces, or 341 c. c.) of fine brandy, containing 48 per cent. of alcohol. Then for three days more he returned to water.

There were thus five periods, viz. of

water-drinking, alcohol, water, brandy, water.

Before commencing the experiments, the man, who had been accustomed to take one or two pints of beer daily, abstained altogether from any alcoholic liquid for ten days.

During the first few days there was a gradual increase in weight, owing probably to the food being rather greater and the exercise less than before; equilibrium was reached on the eighth day, and the weight remained almost unchanged during the alcoholic period. There was slight decrease after alcohol; and on the last brandy day a slight increase, which was maintained in the after period. The general result appears to be that (other conditions remaining constant) the effect of alcohol in modifying weight is quite unimportant. The results of the experiments may best be given in relation to the different functions of the body; and first in regard to the temperature of the axilla and rectum, it appeared that when taken as above described, alcohol and brandy produced little change in the temperature of either the axilla or rectum; but what effect there was, was rather in the direction of increase than of diminution. Secondly, in regard to the circulation it was found that the pulse was increased both in frequency and volume, rising in number from 77·5 before alcohol to a max. of 94·7 with the largest doses. The capillary circulation was increased, shown by flushing of face and neck, &c. As conclusions from the sphygmographic observations that were made, it followed that there was increased frequency of the ventricular contractions of the heart, and increased rapidity of each contraction, the ventricle therefore doing more work in a given time, the period of the heart being much shortened, and the blood moving more freely through the capillaries, so that the increased quantity of blood which it is to be presumed was thrown into the arteries, was very quickly got rid of. Thirdly, in regard to its action on the renal secretions, the authors show there was a decided increase in the amount of

water eliminated; but they demonstrate in opposition to previous experimenters that, as long as the ingress of nitrogen is the same, 8oz. of absolute alcohol and 12oz. of brandy have no effect, or only a trifling effect, on the processes which end in the elimination of nitrogen by the urine, and most decidedly do not lessen the elimination. Further, the influence of alcohol on the elimination of chlorine and phosphoric acid, and upon the free acidity of the urine, is inconsiderable. The action of alcohol on the elimination of nitrogen by the alvine discharges was probably inconsiderable, and no experiments were made upon its effects upon the pulmonary excretion.

Putting together the evidence derived from the pulse as felt by the finger, from the state of the cutaneous vessels, and from the sphygmographic tracings, it seems fair to conclude that the chief effects of alcohol on the circulation in health are on the ventricles (the rapidity with which contractions are accomplished being greatly increased), and on the capillaries (which are dilated and allow blood to pass more freely through them).

As regards the mode in which alcohol is eliminated from the body from the application of a colour test, they are of opinion that a good deal must be eliminated by the lungs, and still more by the skin. Some also, though only a small proportion, must be given off by the renal and alvine discharges.

They found that one or two fluid ounces of absolute alcohol, in divided doses, increased the appetite; 4oz. lessened it, and larger quantities almost entirely destroyed it.

Estimating the daily work of the heart at 122 tons lifted one foot, the heart during the alcoholic period did daily work in excess equal to lifting 15·8 tons one foot, and in the last two days did extra work to the amount of 24 tons lifted as far. After the alcohol was omitted, the heart showed signs of weakness.

From the general results of the experiments, it appears, that any quantity over 2oz. of absolute alcohol would certainly do harm to this man, and

that as every function was performed perfectly without it, its use was wholly unnecessary. They concluded by remarking that they were hardly prepared, notwithstanding their previous experience, for the ease with which appetite may be destroyed, the heart unduly excited, and the capillary circulation improperly increased. Yet

they recognise the great practical benefit that may be derived from the use of alcohol in rousing a failing appetite, exciting a feeble heart, and accelerating a languid capillary circulation, though, for these objects to be fulfilled satisfactorily, there is necessity for great moderation and caution.—*Nature*, June 2, 1870.



### FOOD v. ALCOHOL IN NERVOUS DISEASES.

THE *Practitioner* for June contains an article "On the value of a large supply of Food in Nervous Disorders," by Dr. Fielding Blandford, from which we give the following extracts :—

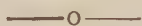
"The next variety of neurosis in which the efficacy of abundant food is markedly shown is alcoholism, whether acute or chronic. I shall not here enter upon the question whether delirium tremens is ever caused by the withdrawal of alcohol; controversy upon this point is not yet at an end, and it will exist so long as we are ignorant of the precise pathological cause and condition of delirium. But whether alcohol is to be entirely avoided or not in the treatment of this disease, it is, I believe, an established fact that abundant nourishment, not spoon diet, but solid food, should be given as soon as the stomach can retain it. The irritability of the latter is a difficulty to be met in various ways, and owing to this we may at first be obliged to resort to concentrations of food; to Liebig's extract, various preparations of beef-tea, and so on. It would appear that sleep is far more easily procured, and medicines given for it are far more efficacious, if an abundant supply of nourishment is administered at the same time.

"It is rather, however, in chronic alcoholism that the good effects of food may be witnessed. Here it is often of the greatest consequence to abolish alcoholic stimulants entirely; in fact, in such abolition lies the only hope of effecting the reformation of the chronic drinker. The intense

sinking and craving for the accustomed stimulus may often be effectually met by food, especially if a small quantity be given frequently, as recommended already. Such patients are unquestionably most difficult to deal with: they assign reasons of all kinds for rejecting food, and for being treated by their favourite remedy. They are faint, they require support, they suffer from stomach ailment, from pain, from want of appetite, nausea, or sinking; but they rarely vomit that which they take if drink is withheld, and this is a tolerably sure sign that the stomach is equal to the digestion of the food. The symptoms of alcoholism need not be here described; but whether they be the transient and immediate results of a heavy debauch, or the graver signs of commencing degenerative change of the nerve-tissues, which runs on to alcoholic paralysis, epilepsy, or dementia, food is equally demanded, and is in fact the one thing which can arrest this degeneration by supplying nutritive elements in large quantities. The recovery in such cases is often astonishing. I lately saw a young man who for many weeks was completely paraplegic, but who nevertheless entirely regained the use of his limbs. The recoveries, too, from alcholic dementia are often equally surprising; in fact there seemed scarcely any state from which recovery may not take place if the disease has not existed for a long period, and if we are able to withdraw all alcohol, and administer nourishment in large quantity.

"Hysterical women—I am not now speaking of young girls—are specially prone to eat irregularly; to take food, if possible, when unnoticed; to eat altogether a very inadequate quantity, and to eke it out by an inordinate proportion of stimulants. If we look at such, especially the hypochondriacal, their whole aspect betokens innutrition. Often they are miserably thin; if they are given to drink they may be fat, but their flabby tissues speak of low organisation and defective power. It is evident that the nervous energy of such people is very low; this is manifested by their mental depression and disturbance, and the defect must be supplied from some quarter or other. But whence can a supply of force come except from the

material of food taken into the system by the alimentary organs? Moral measures are, it is said, and said truly, essential to the recovery of such persons. But moral measures constantly fail, because the bodily health does not allow of mental improvement, and is not *pari passu* attended to. As in more marked mental aberration no amount of argument, proof, or moral suasion will expel a delusion which vanishes of itself when the bodily health is renovated; so change of scene, of persons, and moral treatment of every kind, will fail with the hysterical or hypochondriacal so long as they try to live upon physic or alcohol, or upon a diet almost devoid of nutritive elements."



#### DISUSE OF ALCOHOL IN GRAVE SURGICAL OPERATIONS.

THE following abstract of an important case, which is fully reported at p. 368 of *The Medical Press and Circular* for May 11, 1870, by Mr. Isaac Baker Brown, of London, the well-known operating surgeon, will be of interest. The case was that of a single lady, aged twenty-four, who was sent up to London by Mr. Harrison, of Chester. She was suffering from an enormous ovarian tumour, and also from tubercular disease of the lungs, the latter being so far advanced that many consultations were held as to whether there was any chance of her surviving the operation. But as it was obvious that she must die in the course of a few weeks if no operation were performed, it was decided to remove this enormous tumour from the abdomen, in the hope of prolonging her life, and giving her a chance of recovering from the lung disease. Before the operation all alcoholic beverages were stopped, and she was placed on free milk and oleaginous diet. Mr. Baker Brown in his report, says:—

"On December 28 the operation was performed, with the assistance of Drs. Harrison, Walker, Freeman, and

others, chloroform being administered very admirably by Dr. Edmunds. . . . She had considerable cough and debility for a week or more, but everything went on well. On the third day she took nourishment freely, with a good quantity of milk, and had not one bad abdominal symptom. On the fourth day removed three or four sutures. Cough gradually lessened, and chest symptoms improved. . . ."

"Jan. 17.—Dr. Edmunds saw her again with me yesterday, and found the incision quite healed, and her general health much improved; also her chest symptoms considerably relieved. Ordered cod-liver oil and generous diet, with an abundance of milk. She had a violent hysterical attack at the end of the month, but improved so much that she entirely lost her cough, and she left London on February 10 for her home in the country, apparently quite well. On the suggestion of Dr. Edmunds, she had abstained entirely from alcoholic beverages, and, so far as I could judge, with marked advantage. This case is one of great interest, showing clearly that an ovarian tumour may be re-

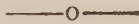
moved with advantage when a patient is seriously wasted with lung disease. She looked as if she could not have lived many weeks, and a second tapping would probably have precipitated her death."

We think that this case is well worthy of consideration, not only by the profession, but by the public generally; and doubtless, if medical men would try the effect of their dietary and medicine with the simple omission of alcohol, most favourable results would follow—results which, we make bold to say, would surprise the present race of medical men as much as did the recoveries a generation back, when patients refused to be bled or poisoned according to the then re-

ceived necessities of medical science. We believe that the present faith on the part of the profession in the curative or sustaining powers of alcohol has no more foundation than the faith which the last generation of medical men had in bleeding, starving, and salivating; and it is a most singular fact that the very same class of patients, *i.e.* those suffering from inflammatory diseases, which used to be killed by depletion, is now poisoned with brandy. When shall we come to confide more in the recuperative powers of nature, aided by philosophical hygiene on the part of the physician, and skilled nursing on the part of friends?—*Alliance News*, May 28, 1870.



## Notes and Extracts.



PREVENTION OF LEAD-POISONING.—M. Peligot announces, on the authority of the chief of some extensive works in France, that he has found that the introduction of the free use of milk as a beverage by the men has exempted them from the lead-colic, previously frequent.—*British Medical Journal*.

NEW FRENCH WORK ON ALCOHOLIC LIQUORS.—We have perused attentively many chapters of a work written by L. F. E. Bergeret, principal medical practitioner at the Hospital of Arbois (Department Jura), "On the Abuse of Alcoholic liquors," and find this author to be greatly enlightened on the subject of intemperance. The views of M. Bergeret on the phenomena of inebriety, distinguished by him from its natural results, are similar to those expressed by our own medical friends; indeed the most experienced Temperance advocates could advance nothing truer or more striking than that which a consider-

able portion of the volume contains. Every article is accompanied by a relation of facts which have come under the author's eye, or been known to other respectable medical practitioners. Appalling as have been and are still the well-attested effects of intoxicants in our own land, none are more dreadful and revolting to humanity than very many given by L. F. E. Bergeret, and others engaged in his profession in France. We hope to give an analysis of the work, with a translation of some of the more important sections, in an early publication.

DEATHS FROM ALCOHOLIC POISONING.—The death from alcoholic poisoning in Great Britain is prodigious; it may be set down at something like a tenth of the whole death-rate of the country. It cannot be supposed that this is the result of a kind of madness which controls and subdues reason. The fact is, the great mass of the population are not

alive to the danger of the practice of drinking to excess. They know nothing of the alcohol they take, or of its dangerous effects upon the organs of their bodies. It is in vain to ask them to deny this indulgence unless they are taught the nature of the evils it produces in their systems.—*What shall we teach? or, Physiology in Schools.* By Edwin Lankester, M.D., F.R.S.

TREATMENT OF DELIRIUM TREMENS BY HYDRATE OF CHLORAL.—Dr. George Balfour, of Edinburgh, comments upon the change which, within the last five and twenty years, has come over our mode of treating delirium tremens. Formerly, under the influence of the dogma that the patient must sleep or die, the formula in vogue at the Edinburgh Infirmary was: Tinct. opii, ℥j; tinct. hyoscyami, ℥ij; spt. communis, ℥j; taken at intervals till sleep was induced: and there can be no doubt that this treatment was most positively injurious in all but the most wary hands, and only kept its ground by being less hurtful than the indiscriminate practice of blood-letting which immediately preceded it. Subsequently, the expectant treatment recommended by Dr. Ware was largely employed, which, though less positively injurious, presented special risks of its own. With the introduction of the bromide of potassium began a new era in the treatment of this disease, its use for from twelve to twenty-four hours being sufficient to induce refreshing sleep and a speedy convalescence. The dose required in some instances, however, was large (half a drachm), and required to be frequently administered, even as often as every hour, till ten or more doses were given, before it took effect. This was always troublesome; and having had experience of the good effects of the hydrate of chloral in other affections, Dr. Balfour determined to give it a fair trial. The first case of delirium tremens treated by it was one of maniacal ferocity, and had been under treatment for three days. Two doses of hydrate of chloral of thirty grains

each, with an interval of an hour between them, sufficed to induce refreshing sleep and to restore the patient to health. Dr. Balfour records five other cases of varying degrees of severity, in all of which most satisfactory results were obtained.—*Edin. Med. and Surg. Journal*, May, 1870.

THE SAILOR'S STORY.—“I’ve been fourteen years a sailor, Miss, and I’ve found that in all parts of the world I could get along as well without alcoholic liquors as with them, and better too. Some years ago, when we lay in Jamaica, several of us were sick with the fever, and among the rest the second mate. The doctor had been giving him brandy, to keep him up; but I thought it was a queer kind of ‘keeping up.’ Why, you see it stands to reason, Miss, that if you heap fuel on the fire, it will burn the faster, and putting brandy to a fever is just the same kind of a thing. Brandy is more than half alcohol, you know. Well, the night the doctor gave him up, I was set to watch with him. No medicine was left, for it was of no use. Nothing would help him, and I had my directions what to do with the body when he was dead. Towards midnight he asked for water. I got him the coolest I could find, and gave him all he wanted, and if you’ll believe me, Miss, in less than three hours he drank three gallons. The sweat rolled off from him like rain. Then he sank off, and I thought sure he was gone, but he was sleeping, and as sweetly as a child. In the morning, when the doctor came, he asked what time the mate died. ‘Won’t you go in and look at him?’ said I. He went in and took the mate’s hand. ‘Why,’ said he, ‘the man is not dead! He’s alive and doing well! What have you been giving him?’ ‘Water, simple water, and all he wanted of it!’ said I. I don’t know as the doctor learned anything from that, but I did, and now no doctor puts alcoholics down me, or any of my folks, for a fever, I can tell you! I am a plain, unlettered man, but I know too much to let any doctor burn me up with alcohol.”

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THE  
MEDICAL TEMPERANCE JOURNAL.

October, 1870.

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Original Contributions.

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VITAL STATISTICS OF INTEMPERANCE.

IF the progress of sanitary science has not been as rapid and as satisfactory as might be desired, many important advances have been made within the last thirty years, and the prospects for the future are altogether cheering. From the position now attained, the student looks back with amazement upon the superstitions of times not very remote, when epidemic diseases as well as various forms of insanity were classed, along with great natural disturbances, as dispensations of divine displeasure, and beyond the reach of human means to divert or remedy. With a better knowledge and a purified faith, the intelligent observer of this day accepts all forms of disease as the necessary and inevitable punishment of great transgressions, and at the same time amenable to proper treatment. Ever since the days of Howard we have been learning the lesson that, although death is the lot of all humanity, a high rate of mortality and a large amount of disease are due to preventible causes. As civilisation has progressed, and improved habits have grown among the people, epidemics, the plague, the black death, the sweating sickness, the gaol fever, and others, which were the scourges of the thirteenth and fourteenth centuries, and even at a later period in our history, have disappeared, and there is no reason why typhus fever should still be found to linger in the crowded neighbourhoods of our large towns, if men would adopt the measures of prevention which experience suggests. It is a great gain that we have been able to establish upon a scientific basis the important truth, that many prevalent diseases arise from removable causes.

By the death-rate we are able to measure the advance of medical science, and also the true progress of the population. A low mortality generally indicates the presence in a larger degree of the comforts and habits conducive to well-being than is possessed by a population where a high mortality prevails. The condition, both physically and morally, will be better in the former case than in the latter. There is no more unfailing index to the state of a community than the bills of mortality.

Of late years there has been much activity in this direction, an activity that has never slumbered, but it is prone to overlook some of the more influential agencies in the generation of disease. It always happens that the more apparent causes of an evil are those first attacked, as these force themselves upon observation; while the more potent ones, the beginning in the series, are entirely overlooked, and therefore the remedies are often inappropriate or misapplied. This is true as to sanitary inquiries. There has been so much said and written on bad drainage, defective ventilation, imperfect water supplies, and overcrowding, that there is almost nothing left to learn. It is now received as an acknowledged and indisputable fact, that all or any of these conditions are unfavourable to health, and that bad health is the enemy of morals in the same degree that bad air is the enemy of health. Experience has shown that neither the school nor the church can work with effect where privation, suffering, and misery oppress the inhabitants. These have become mere truisms, but the influence of vicious habits in producing evil sanitary conditions, in rendering them more inveterate, in constituting formidable obstructions to the work of amelioration and reform, is not appreciated. The subject has been treated in every aspect, with one great omission. The effect of drinking upon the public health has never been considered as its importance demands.

The term drinking is taken in preference to that of intemperance, as it is impossible to fix a meaning to the latter term. There is a drinking in thousands of cases that, in the ordinary acceptation, would not be pronounced intemperate, but which is more injurious to health than occasional inebriety. It is known to every medical man that there are cases where drinking has gone on for years, has never reached a state of violent or even conspicuous drunkenness, but has at length ruined the health, and broken the constitution. The drinkers have not been incapacitated from the pursuit of their usual avocations, have recruited once a year by a holiday at some watering-place, or by foreign travel, have borne all this time the reputation of sober men, but when life ought to reach a hale and vigorous autumn, are stricken down by heart disease, gout, or rheumatism in some of its protean forms. It may leave its traces upon the brain, and

mental affliction follow, which is much more terrible than bodily disease. In the majority of cases this drinking ends in premature death, but in many others leaves a shattered frame. The man becomes a patient at the age of manhood, when existence ought to be in its greatest vigour. The true cause of debility is seldom suspected by surviving friends, and not always by the sufferer himself. So long as medical men prescribe strong drinks and use them freely, we must not expect them to pronounce very strongly against what would be called moderate drinking. They condemn, as all men do, drinking to excess, but they do not define what is meant by excessive drinking, and thus an insidious and evil practice goes on from generation to generation. The physician deceives the patient, and the patient deceives the physician, not designedly, but because both are labouring under a self-deception, and it seems to be matter of general agreement that as little as possible should be said about alcoholic liquors and their effects. There is a tacit understanding that the wine, the brandy, and the beer, must not be touched in the general regimen, nor abandoned in the treatment of disease. It will not be regarded as a high estimate when we assert that one-fourth of the total amount of disease, and of premature mortality, is due directly and indirectly to habits of drinking, and yet it is a subject that is avoided by those who are best able to treat it, and who are within reach of the best sources of information.

This avoidance of a difficult and delicate subject is the reason why our vital statistics are so imperfect. The delusion as to the good and exhilarating properties of alcoholic beverages is so pleasing, that men do not wish to be undeceived. In the face of strong prejudices our statisticians do not venture to give the facts, but in most cases they fall into the common error—that of assigning only the proximate cause of death, and not looking beyond it. A writer in the *Temperance Record* has quoted the following passage from Quetelet:—

“Drunkenness is a vice of which we ought to have exact records in countries where the police are active; yet it is to be regretted that they are altogether unknown to those who have the greatest interest in making use of them. As drunkenness is a common source of many other vices, and also of crimes tending to demoralise and to deteriorate the species, Governments ought to favour the researches of learned men, who seek to ascertain the condition of the people and who try to improve them. Drunkenness is influenced by a great number of causes which are easily estimated, because the necessary data require less investigation than those relating to analogous estimates. I am persuaded that a work, well written, which would endeavour to make known the injuries this pestilence inflicts on society, would be of the greatest utility, and would furnish an explanation of a great number of isolated facts which depend upon it, and which we are in the habit of considering as purely accidental.”

The writer in quoting this passage remarks that the work,

"A Treatise on Man," from which it was extracted was published in England in 1842, and up to this time there is no work that gives the results of scientific and original observation on this momentous topic. We thoroughly agree with him that the literature of the subject is very defective, and it supplies very scanty data as to the influence of drinking upon crime. We have abundance of isolated facts, of probable and improbable conjectures, but they stand before us without proper connection. To an inquiring and logical mind they appear as guesses at results, and hence whatever conclusions may be drawn from them are diminished in force or weight. If this may be said in reference to the evidence collected as to the influence of drinking upon crime, it applies a hundredfold to the returns of insanity and disease. In reference to vice and crime there is an established opinion that drinking stands foremost among the more potent causes, but there is no adequate appreciation of the extent to which drinking produces disease, nor the extent to which disease leads to poverty and crime. The further the mind explores this field of investigation, the more is it perceived that all these social evils and maladies are linked together, that they act and re-act upon each other, and that it is often difficult to discriminate between disease and crime. One thing is clear enough, that drinking is closely allied to all the more virulent forms of evil; and whether it be regarded as a cause or an effect, it is the most powerful obstacle standing in the way of practical and efficient remedies. It is therefore important to inquire how far our statistical inquiries are in the right direction. By an oversight, or by the desire to avoid a painful or an unpopular subject, the returns on what we may term the vital statistics of intemperance are eminently imperfect and unsatisfactory.

For several years past there has been scarcely one report from the Registrar-General but has, in some part of it, lamented the imperfect nature of many of the returns; and suggestions have been made as to methods by which they might be improved, but we do not remember one instance where the desirableness of registering with more accuracy the cases where death is the result of drinking has been pointed out. What would be of even greater importance were it attainable, would be a return as to the predisposing cause of the disease of which the deceased is reported to have died. There would of course be great difficulties in the way of obtaining such returns, but on being carefully looked at many of them would disappear, and others become less formidable. There is always uppermost the fear of giving pain to bereaved relatives and friends, but as the names are not given in the returns, the purposes of science might be served without giving unnecessary distress to a family. The physician is almost

invariably placed at a disadvantage. He is often called in at an extremity, and expected to do impossible things. He is not made acquainted with the previous habits of the patient, and the absence of this information will often seriously affect the treatment. Then as to the returns, in cases of death we obtain only the immediate cause of death. The desired information is this:—a death is recorded from disease of the heart,—what were the previous habits? was the deceased a drinker and to what extent, and for how long a period? Such returns would show that drinking is more fruitful in disease and death than any other cause. If such information was felt to be of value, methods of collecting it would soon be discovered. In the last session of Parliament Sir John Lubbock moved that in taking the next census provision should be made to ascertain the number of marriages of first cousins and the results. The object was to obtain data by which to estimate the evil of intermarrying between those near akin. The inquiry was objected to on very insufficient grounds, as no facts of such a nature can be valueless or unimportant. But what is the relative value of such returns to those to which we are now directing attention? We see examples of this frequently. The smaller attracts more attention than the larger—the occasional than that which is of constant recurrence. An accident like that at Abergele excites a national horror, but the deaths through intemperance scarcely any; and one incident in the late war affords another proof of this disposition. We were in a small company where the war was the topic. It was evident that the fate of the man, Lieutenant Harth, who was condemned as a Prussian spy, and that with all the pomp and circumstance of a military execution, and which was reported on the day of the conversation, excited a deeper sensation in that company than the fearful slaughter of the great battle of Gravelotte, which was also before them as a topic of conversation. It would serve little purpose to speculate upon the laws of sympathy under which such feelings are induced; we know that it is almost universally so. If, therefore, it is sought to impress an audience with the horrors of war, a more vivid effect will be produced by a single episode in the fight than by any general description. The popular mind is not accustomed to generalisation, but surely our scientific men ought to be able to recognise the importance of making the returns as to the causes of death much more complete than they are now. The question is of some importance, How many deaths now put down under other heads, if the truth could be ascertained, would be ascribed to drinking?

We must now go into some particulars. In the thirty-first annual report of the Registrar-General, for 1868, we find, among other causes of death, the following returns:—

		Males.		Females.
ALCOHOLISM	{ a Delirium tremens	390	...	49
	{ b Intemperance ...	247	...	102
		<hr/>		<hr/>
		637		151
Total.....				788

Now this number of deaths under the general head of alcoholism is sufficiently appalling; but as it occurs with about the same regularity year by year, it excites little notice or remark. Let us observe what happens when two or three cases of hydrophobia occur. In the *Social Science Review*, for September, 1866, we find the following:—

“HYDROPHOBIA.—Within the last three months the papers have recorded four deaths from hydrophobia—three in London and one in Manchester. From these cases there can be no doubt that this terrible disease is spreading amongst dogs, and every precaution should be taken that it does not extend to human beings.”

Then follows a suggestion that all dogs found at large should be destroyed. The whole number of deaths from hydrophobia in the year 1866 was 36, an unusually large number and one calculated to create alarm. The total number of deaths from hydrophobia during ten years, 1859 to 1868 inclusive, is 140, or 14 per annum—the year 1866 being the highest, and the year 1862 being the lowest. In the year 1862 there was only one death. In 1868 there were seven. In the same ten years the number of recorded deaths from alcoholism—*i.e.* delirium tremens and intemperance—is 8,234, or 823 per annum. In making the comparison it must be kept in view, that we have all the cases of hydrophobia recorded, but the number of cases of delirium tremens and intemperance do not appear. In one case there is no motive to concealment, but it is to be feared a tendency to set down deaths to hydrophobia which are not really due to that cause. In the other case there are many motives to a disguise and concealment of the truth, and therefore the number of deaths are out of all proportion, and much fewer than the cases actually occurring.

It is not necessary to explain or defend such a conclusion, as it is self evident; but the cases brought before our coroners' juries furnish evidence of the incompleteness of our returns. It has been made a complaint for many years, by the Registrar-General, that the reports of the coroners' juries were “incomplete and unsatisfactory.” In the last report he reiterates the complaint, that “in cases of accident the kind of accident is not given”; in cases of burns and scalds, amounting to 937 deaths, there is no statement as to how the injury was occasioned; and so on through the whole of the cases upon which inquests had been held. But no suggestion is made as to the desirableness of recording in how

many cases drinking had to do with the accident. In 1868 the total number of violent deaths in England was—

Males, 12,833; females, 4,135; total 16,968.

But we find no explanation as to the causes of these violent deaths in the largest number of cases. We have a case before us of an inquest at Bromley, in Kent; we take the first that presents itself. A man is thrown from a cart and killed. One of the witnesses deposed that he had seen him some time before driving very carelessly through the town, evidently under the influence of drink, and that he had gone up to him and cautioned him. Very soon after he had run his cart against a waggon, was thrown out and killed. The jury returned a verdict of "accidental death." It is unnecessary to multiply cases. They occur in everyday experience. We turn to the annual report of Dr. Lankester, coroner for the Central District of Middlesex, and in doing so must remark that his reports are almost exceptional, as he goes into the causes of death. What he has done in relation to cases coming before him as coroner, indicates what is desirable in the returns of all cases of death, and the machinery of our Registrar-General's office might be made much more useful by expanding its inquiries. In reference to this class of cases (accidental death), Dr. Lankester says:—

"Under the head of injuries by falls from ladders and scaffolds, &c., are included those accidents to which men are more particularly liable whose business it is to work where they are necessarily exposed to danger. I have only two remarks to make in these cases. The first is, that they often happen from habits of intoxication; and the second is, that old men, in proportion to the numbers employed, are more liable to such accidents than young ones."

He says again:—

"The next most frequent group are 'run over' accidents from conveyances drawn by horses. In this group a large number are due to drunkenness. This does not always appear from the verdict, as juries are exceedingly indisposed to return verdicts of death by 'drunkenness,' unless the evidence is very strong indeed. In many of these cases the injury is frequently slight, but where a habit of drinking exists it brings on delirium tremens, of which the injured person dies."

In the cases of deaths from suicide, he says:—

"In a large number of cases habits of intoxication have preceded the act of suicide."

In another class of cases (deaths from suffocation), he says:—

"There is much reason to fear that in some cases one or both of the parents may have not been sober when they have gone to bed, and in this state the necessity of fresh air for the child has been entirely forgotten."

In the third annual report for 1865, Dr. Lankester returns to the subject. He shows that the larger proportion of deaths of infants upon which inquests were held, were cases of suffocation

in bed. Out of 330 inquests upon infants under one year of age, 113 were from that cause. He then says:—

“A large number of cases of suffocation occur on Sunday morning. This points to two circumstances which may have led to the death of the child. Either the mother works harder on the Saturday night and goes to bed so exhausted that she cannot pay proper attention to the child, or one or both parents go to bed intoxicated, and the child is neglected in consequence.”

We have gone hastily over this ground, but it establishes very clearly, wherever we have data for comparison, the fact that drinking, more than any other, is the cause of disease and death. Will it not also account for the heavy bills of mortality, and for the large amount of sickness which swell the returns? Let us take a glance at our infant mortality. We have returns as to the causes of disease, such as scarlatina, small-pox, diphtheria, diarrhœa, convulsions, &c.; but there can be no doubt that a large proportion of such ailments ending in death arise from drinking, from hereditary taint, from the habits of parents anterior to birth, or from alcoholic treatment of the mother during the period of gestation, childbirth, or nursing. In 1868 the deaths at all ages were—

Males, 247,107; females, 233,515: total, 480,622.

Of these the deaths of children under one year of age were—

Males, 67,290; females, 54,785: total, 122,075.

Under five years of age the deaths are as follow:—

Males, 108,325; females, 94,804: total, 203,129.

Now the total number of births, exclusive of stillborn, of which there are no returns in 1868, was 786,858, so that rather more than 25 per cent. of all the children born die before the age of five years. If we look at the table, *the causes of death*, we shall find a long array of infantile diseases, but, as we have said, no clue as to the antecedents of these diseases. There are, no doubt, as the consequences of drinking and other vicious habits, multitudes of children born with weak and sickly constitutions, ricketty or scrofulous. In such there will be a predisposition to any infantile disease that may be prevalent, and a deficiency of strength to resist the attack. No returns could be expected to embrace a record of such cases; we can only form an estimate of them by the results. We will take three of the diseases the most destructive to infant life, and all of them to a large extent owing their severity and fatality to the causes we have named. We find that under the head of convulsions, the deaths in 1868 were—

Males, 14,388; females, 11,509: total, 25,897.

Of these the deaths under five years of age were—

Males, 14,064; females, 11,212: total, 25,276.

A large proportion of these cases would arise from gin-drinking among the poorer, and spirit, beer, and wine drinking among the

richer classes. Again, in diarrhœa, the total deaths in 1868 were—

Males, 15,347; females, 14,474: total, 29,823.

Of these the deaths under five years of age were—

Males, 13,261; females, 11,849: total, 25,110.

We have no information in any statistical returns as to the proportion of these deaths due to drinking, but from inquiries conducted for many years and extending over a wide field of observation, but which do not admit of being reduced to any statistical formula, we believe that one-fourth of this excessive infant mortality may be put down to the drinking habits of the people, of course including direct and indirect influences.

Did space permit it would be easy to accumulate a large amount of collateral evidence to support this statement, startling as it may appear. Dr. Maudsley, in his valuable work, “*The Physiology and Pathology of Mind*,” says:—

“Parental intemperance and excess, according to Dr. Howe, hold high places as causes of imbecility and convulsions in children. Out of 300 idiots in the State of Massachusetts, whose histories were carefully investigated, as many as 145 were the offspring of intemperate parents. Here as elsewhere in nature, like produces like; and the parent who makes himself a temporary lunatic or idiot by his degrading vice, propagates his kind in procreation, and entails upon his children the curse of the most hopeless fate.”

We pass on to the deaths of adults. In this case again we have no information as to how far drinking habits may be the cause of death, but what inferentially arises from the returns of coroners' courts. We submit, however, that the proportion to the total number of deaths would not be much less in those cases where deaths arise from so-called natural causes, as in those where the death calls for judicial inquiry. Judging by all analogous cases, there can be no doubt that the proportion would nearly approximate. Dr. Lankester in his fourth report says:—

“Another group of cases in these deaths from natural causes are those of diseases of the nervous system, the heart, lungs, and abdominal viscera, which evidently arise from habits of intoxication. I have not given them in a separate table, as there is considerable uncertainty in the verdict delivered as compared with the certainty of the evidence given as to the cause of death. In the year 1866 I find there were forty-seven cases in which verdicts were delivered directly connecting the death with excessive drinking. I have, however, the conviction that in a large number of the cases where persons have suddenly died or been found dead, and in which drinking is not referred to, that death arises from habits of intoxication. Few persons, except those who have studied the physiological effects of alcohol in the human frame, can form an idea of the extent to which this cause alone contributes to the deaths placed under the head ‘natural causes’ in the returns of the coroner’s court. A large number of cases returned under the head of ‘congestion of the brain,’ ‘effusion of blood on the brain,’ and ‘effusion of serum in the brain,’ are directly due to the immediate effects of over-doses of alcohol upon the system, whilst a very large proportion of the cases which fall under the head of ‘fatty degeneration of the heart,’ ‘hypertrophy and dilatation of the heart,’ and ‘diseases of the

liver and kidneys,' are due to the long-continued action of alcoholic drinks on the system. These are the direct effects of alcoholic beverages on the system, whilst under the head of accidental deaths, suicides, and even homicides, the terrible effects of this indulgence are seen in the bills of indictment which coroners' verdicts return against the drinking habits of society."

If the statement thus made be compared with the Registrar-General's report, table *causes of death*, it will be seen that the diseases he names in the case of natural deaths predominate in numbers over all others. Does not the same law govern the proportions in cases of "violent" and in "natural" deaths? The inquiry is of vast importance.

The space allotted to us is exhausted, but not our subject. We have been induced to enter upon it, as we find there is a tendency in writers upon social subjects, and also upon medical science, to underrate the evils which arise from the general use of intoxicants. They speak as if there was nothing of mischief behind moderate drinking, and under a general term of intemperance they class only that form of drinking which is in fact drunkenness. Open or secret drunkenness is not so fatal to health and morality as the drinking to which we refer, which goes on systematically and regularly, because the proportion of drunkards to what are denominated moderate drinkers is really small. It is unworthy of an age of keen scientific investigation that such vague terms and indiscriminating reasoning should be employed in relation to an evil that is confessedly one of the greatest known to modern civilisation, whether we reflect upon it in relation to public health or to public morality. The continuous appeals against intemperance can do little, so long as men are called upon to be temperate and encouraged to take the drink. Were there no moderate drinking, there could be no drunkenness. The question in debate is narrowed down to the smallest possible limits, and the economist and the physiologist are called upon to apply the same rules as they would apply in any other field of investigation. If we are told that we need other evidence than that which is supplied by a day by day observation of society, why is not the evidence collected? Dr. Farr says:—

"It is the duty of physicians, in recording facts respecting disease and death, to employ the same care as astronomers and meteorologists bestow on the observation of physical phenomena, and if that is done the observations will admit of the same kind of generalisations. And it must be evident that, as far as progress is concerned, those direct observations on the death and life and reproduction of the human race are of fundamental importance."

We agree with him most fully. There can be no inquiry more important. It is more vital to the nation's happiness and prosperity than any other question that engages attention. We go, however, further than Dr. Farr indicates. We desire not only

more attention to the classification of the diseases common among us, but it seems essential to the purposes of science that we should go back to the causes which have superinduced disease, which have given to the old diseases a more malignant form, and which have apparently generated new classes of disease. As a knowledge of pathology extends, there will be less and less danger of confounding one disease with another; but there is an indifference—we may, without any injustice, say an indisposition—to look certain social facts fairly in the face. The effects of our drinking system are not exposed, are not in fact fairly investigated by those who have the care of the public health. Sanitary science can only be built upon a general knowledge of the moral as well as physical conditions under which the public live. Reform, to be successful, must improve the people's habits as well as their homes. It is a serious mistake to suppose that better homes and universal education will very materially work the desired good. What is it that fastens the poor to their condition, what is it that enervates them, what is it that destroys their self-respect, what constitutes the great obstruction in the way of improvement? There can be only one answer—the appetite for alcoholic drinks, which has become so general among certain classes that everything else is sacrificed to it. The leaders of sanitary reform tell us that a heavy death-rate, and the presence of preventible disease, is the loss of so much productive force, an abstraction of so much energy that would otherwise go to the creation of national wealth. No economist will dispute or doubt the fact.

These considerations raise the Temperance cause from the small platform of a sect, and demand from all classes of reformers serious attention. There are two things upon which the material prosperity of communities depend more than upon all others, and these will become, as knowledge advances, more and more the object of solicitude on the part of the statesman who is honestly labouring for the general welfare; and these are, first, to increase the abundance of food—and abundance means cheapness; and, secondly, to raise the standard of public health. It has been said that the fever tax is the heaviest and most inexorable of all taxes. It comes indirectly in a variety of forms, and impoverishes the people whose sons and daughters it has slain. The money loss is incalculable, and so is the misery and demoralisation which follow its footsteps. Surely, then, it is time that the drinking of our country—not intemperance in its vague and popular sense, but drinking—should be carefully examined in all its relations. Let us see what it leads to, let us fairly estimate what it costs. Science can have no loftier aim than that of banishing and lessening disease, and lifting up those who are sunk in the despondency of poverty, and under the attenuation of disease, and have become

burthens upon the industry of others. By placing them in the rank of independent labourers, they become the strength, rather than the weakness, of the State. It is not alone those who live by daily labour who suffer—the suffering reaches all, and therefore all are interested in discovering and removing the hidden causes of disease.



## ON THE DIETETIC AND MEDICAL USES OF WINES.\*

THE late numbers of our medical cotemporary, *The Practitioner*, amongst other valuable articles, contain a series of contributions from the editor and his staff on the above subject. As these papers contain some important information relative to the composition and administration of various sorts of wine, it may be acceptable to our readers if we select some passages for observation.

The *Practitioner* does not in these papers discuss the question of the lawfulness or the advisability of using alcoholic liquor in general, either as food or medicine, but takes it as established, both by widespread custom, and by the most recent physiological research, that alcohol, as such, has its *legitimate* place in the sustentation both of the healthy and of the diseased organism. As advocates of temperance, it has been our especial aim to discover the legitimate place which alcohol, in the form of wine or other liquors, holds, either as food or medicine. The conclusions arrived at by the editor and his staff in these papers shall have our earnest consideration, as we think the deductions are scarcely borne out by the logic of facts.

The editor deals with wines solely as being possessed of common properties and uses separate from other alcoholic liquids. Even among wines themselves numerous differences occur, not yet understood either by the public or even by the majority of medical men. It is also with him a matter of objection that certain trade circulars should have been published under the guise of scientific pamphlets on wine, the influence of which is solely of a commercial character. Looking at the host of advertisements in the newspapers of wine-dealers, and the numberless pamphlets which deluge the country by post, we must arrive at the conclusion that the wine traffic is a most flourishing one, which the profession, either in ignorance or

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\* "On the Dietetic and Medicinal Uses of Wines." *The Practitioner*. April, May, 1870. London: Macmillan & Co.

interest, materially assists by certificates, recommendations, and analyses.

The editor starts with the view that wine is a beverage of ordinary life; being persuaded that the subject can only be fairly examined from that standpoint; yet, at the very outset, he admits that it is no doubt true, on the one hand, that a complete statement of the physiological action of wines cannot, in the present state of science, be given; and, on the other hand, that if empirical experience is to be our guide, the circumstances of sickness offer a guarantee for closer and more accurate observation of the phenomena than can be expected when wines are used as a mere beverage of the healthy. It is evident that the editor, in plain language, wishes to say that little is definitely known of the physiological action of wines; and that when they are prescribed either in sickness or in health it is simply empirically. A patient consults a medical man, of some note [in his profession, who prescribes two or three glasses of generous old port, two or three times a day. The patient, from some caprice or other, consults another medical man of note, who orders him to take the same quantity of sherry, but particularly to avoid port. The same patient consults another medical man, who recommends him to shun all wines, and drink weak brandy and water. The same patient consults another medical man, who advises him to ignore all wines and spirituous liquors, and recommends pale ale or bitter beer. Another medical man advises the patient to ignore all intoxicating drinks, and to drink milk and water. Can all the medical men be right? Can all be wrong? Which deserves the most pity—the patient or the doctors?

The *Practitioner's* great aim is to show that adherence to one drink, and generally *one wine*, is almost a necessity for the purposes of health. So, to be healthy, we must all drink only one wine! It will be our object to discover if the editor bears out his argument scientifically, or is indebted for his conclusion, like many others, to empirical experience. We are acquainted with thousands of teetotalers who would not consider themselves healthy if they indulged in the daily use of only one wine; but, on the contrary, according to the amount of wine taken, would they experience a departure from the standard of health. That alcoholic drinks are the commonest of all household remedies for a large number of paltry ailments, cannot be denied; and as the object of the editor is to demonstrate in these papers the prominent fitness of wines above all other alcoholic drinks for all legitimate purposes of this kind, we will accompany him through the task of investigation, as we have yet to be convinced of the benefits to be derived from the use of wine in health or in disease.

Our readers will probably be enlightened by the numerous facts

contained in these papers relative to the various strengths of wines as compared with each other. Strong wines—including port, sherry, madeira, marsala, and all that genus—contain, on an average, something like 17 per cent. of absolute alcohol, the strong ports ranging as high as 23 per cent., or more; and the light wines, including claret, burgundy, champagne, Rhine and Moselle wines, Hungarian wines, &c., average between 10 and 11 per cent. of absolute alcohol, the lightest champagnes not containing more than 5 or 6 per cent. Comparing wines with beers, the poorest sorts of beer contain about 2 per cent. of absolute alcohol; ordinary table ale about 3 per cent.; ordinary porter, 3 or 4 per cent.; strong, from 5 to 6 per cent.; whilst the strongest kinds of malt liquors range through various degrees up to even 10 per cent.; and a common strength for good bottled ale or stout is about 7 per cent. of absolute alcohol. Good brandies and rum average between 45 and 50 per cent.

The *Practitioner* shows that a lady, not exactly ill but delicate, and “needing generous living,” who takes “three or four glasses of port wine a day,” equal to about 8 ounces, consumes  $1\frac{1}{2}$  ounces of absolute alcohol, or the alcoholic equivalent of 50 ounces (five large tumblers) of table beer, or 3 ounces of good brandy, or two-thirds of a bottle of generous claret or Rhine wine. A bottle of twelve glasses of average port is equal in alcoholic strength to rather less than half a bottle of brandy, or two bottles of good claret or hock, or nearly a gallon of table beer or of light champagne. It is by no means unusual for ladies at all delicate to take two glasses of port or sherry at lunch, and the same quantity at dinner, daily, which makes up the alcoholic equivalent of a bottle of brandy every week. The editor, apart from the question whether such an allowance is excessive or not, is desirous of showing distinctly, by this kind of comparison, that the place of the stronger wines is rather among the cordials, to be used under express and careful medical sanction, than among the beverages of common life, since it is plain that a very little carelessness in their use may lead to actual excess. Is there not also a danger to be feared in the carelessness of the medical adviser prescribing these intoxicating drinks? This daily allowance appears to be about the limit of what can be taken by persons leading a not very active life, without provoking symptoms of chronic malaise, indicative of actual alcoholic poisoning. It has been our sad experience to attend thousands of persons suffering from chronic disease, originated or aggravated by a small daily allowance of wine, who have been cured, not by indulging in wines containing a less amount of alcohol, but by total abstinence from all beverages containing alcohol. This is the conclusion arrived at by most medical men who have had

much experience in the treatment of cases without alcohol. The great bulk of the cases which fill our hospitals, workhouses, surgeries, and even make up the better class of private practice, are those in whom alcohol has been doing the work of disintegration silently but surely for months or years.

The *Practitioner* admits there has been a real advance towards temperance of late years, owing, *we* have no doubt, to the wide dissemination of temperance literature, and to the public advocacy of true temperance principles. Is it not an indisputable fact that there are vast numbers of men and women, now-a-days, who drink no alcohol, who enjoy good health, and are more active in mind and body than they would be with even the indulgence of moderate doses of alcohol? On the other hand, is there not a great number of men and women of the middle and upper ranks of society, educated persons, who take a daily allowance of alcohol far larger than before indicated? In fact it is a puzzle for the editor to understand how our respectable classes manage to consume so much more alcohol, without reproach, than the unfortunate Wiltshire clodhoppers can do. Ought not medical men to take some credit to themselves for sustaining this pernicious custom by the wholesale way in which such drinks are prescribed? Moderate diners-out will take on the average eight ounces of strong wines and twelve to sixteen of light wines daily, or make up the equivalent of this with beer or with spirits: in fact, will take about three ounces of absolute alcohol, or the equivalent of about a gallon of the puddle beer that labourers drink. Our virtuous dancing young lady will take not less than three-fourths of this quantity by the time she has finished her last champagne cup at the ball or rout. The *Practitioner* accounts for the upper classes managing to consume more alcohol, without reproach, than the unfortunate clodhopper, because the drinks of the latter are muddled with *cocculus indicus*, &c. We are of opinion that the alcohol, *per se*, is amply sufficient to poison the blood; is, in fact, a far deadlier poison than *cocculus indicus* or other deleterious drugs with which beer is sometimes adulterated. There is great danger of excess, says the editor, merely from the multiplication of alcoholic drinks which are taken by the richer classes; and it will be his aim in these papers to show that adherence to one drink, and generally one wine, is almost a necessity for the purpose of health. It will be our aim to show that abstinence from all alcoholic drinks is the only safe course to pursue if we wish to enjoy uninterrupted health.

The *Practitioner* seriously remarks, in the second paper on this subject, that the multiplication of alcoholic drinks with different flavours, each tempting in its turn, must lead the sharer in convivial feasts to forget how much he has already drunk; more

especially if, as is usually the case, he has no accurate knowledge of the alcoholic strength of the liquors which he takes. We have known persons who have steadily drunk only one kind of wine at the dinner table soon forget how much they had drunk; but as the forgetfulness was the effect of the alcohol contained in the wine disordering the brain, we cannot see why the multiplication of alcoholic drinks with different flavours should alone entice a man to drink to excess. It is difficult for persons in everyday life, who partake of two or three separate alcoholic liquors, to regulate their allowance with anything like nicety. It is our opinion that nicety in allowance is not so much regarded as the desire to experience the narcotising effects of the alcohol.

The editor points out what drinks are most suitable, in the single matter of strength, to be selected as the only alcoholic beverage. The object is to select some alcoholic fluid which shall be weak enough—either when taken neat, or with only so much water as will not make it distasteful—to enable us to drink as much of it as will satisfy all needs for fluid at lunch or dinner without producing any of the injurious effects of alcohol. The editor admits the fact that the injurious effects of alcohol is a condition greatly to be avoided; but is desirous of finding out a beverage containing only so small a quantity of alcohol as shall not be injurious. If it be a recognised fact that alcohol injures the body according to the amount taken, would not a beverage containing no alcohol or any deleterious drug be the best and safest for the constitution?

Table beer, says the editor, containing about 3 per cent. of absolute alcohol, would very well fulfil these requirements; but, to a large number of persons, the quantity of beer that would satisfy thirst, and also prove *sufficiently stimulant*, would not be readily digestible; or, if it did not disorder primary digestion, would cause disagreeable after-consequences. It is clear then that such persons do not drink solely to satisfy thirst, but to be stimulated also; and that, to experience the narcotising effect of alcohol, beer must be taken to a much larger extent than would satisfy thirst. So that drinking to satisfy thirst is one thing; drinking to be stimulated is another. Especially, says the writer, to persons of a gouty constitution, such a regimen would be most unwholesome; also to many persons of rheumatic tendencies, on account of the *sugar* and *dextrine* which some light beers contain. Persons of a rheumatic diathesis could not come to the conclusion that a little extra sugar or gum in their diet would produce an attack of rheumatic gout; but, taken in combination with alcohol in the form of beer, they might readily produce an attack, and that more speedily according to the percentage of alcohol contained in the beer. We have repeatedly suffered from an attack of the

gout produced by drinking beers ranging from 3 to 7 per cent. of absolute alcohol; but we have never experienced an attack of the gout from the use of a light infusion of hops, containing double the quantity of sugar found in beer. Out of hundreds of cases of gout which have been under our care, we do not remember an attack of the gout ever having been produced by so innocent a beverage. From numerous experiments, conducted under our own observation, we have long since arrived at the conclusion that it is the alcohol in the beer which is the great disturbing cause, which interferes with primary digestion, and produces disagreeable after-consequences.

Beer, with its varying percentage of alcohol, is not the type of an universal alcoholic beverage for everyday life to suit the editor of the *Practitioner*; but wine—a natural wine—averaging not more than 10 per cent. of absolute alcohol, is the veritable *Elixir Vitæ*! How grateful ought a discerning public be to that doctor who has discovered the *one wine* which he says is almost a necessity for the purposes of health! We are at a loss to know why *almost* a necessity. Wine is either beneficial or injurious. If a person enjoys health, wine can scarcely be a necessity; especially when so many millions of persons are healthy and happy without its use. Truly might we conclude that the enthusiasm of some medical men on the value of wine to the healthy is strongly leavened with ignorance. One writer of a book on “cheap wines”—a gigantic piece of puffery—complains that whatever is foolish or demi-semi-quackish in advertisements is sure to be contributed by a medical pen, and to be based upon some of these baseless hypotheses which render every age of physic ridiculous to the succeeding one. Unfortunately this model author says:—“I write with a bottle before me, which I am sacrificing for my own inspiration and my readers’ profit; and the alcoholic strength of the generous liquid is only 22 per cent.” The reader, after such a confession, will no doubt be able to appreciate the value of such a treatise on cheap wine.

The two kinds of wine which, as far as alcoholic strength is concerned, meet the ideal type of an universal alcoholic beverage for everyday life, are represented by the *Practitioner* to be a Rhine wine at  $9\frac{1}{2}$  per cent. of alcohol, and a claret at  $8\frac{1}{2}$  per cent. Such wine, as a beverage, alone or diluted with a certain amount of water, would at once satisfy all needs for liquid with the principal meals, and all needs for alcohol in the most convenient and agreeable way. A bottle a day of such wine for an actively employed adult, and a proportionately less quantity for those whose life is more sedentary, would represent the allowance of alcohol which may be said to suit best the standard of ordinary health. We have yet to learn when the

body in health needs alcohol; and more especially that Bordeaux wine is the most convenient and agreeable way of administering it. If health of body is only to be maintained by those who can afford to drink a bottle of wine per diem, how very few living, judged by this standard, may be said to be healthy. Are the millions of teetotalers who take no wine or other intoxicating liquors to be classed under the head of persons diseased, or of those whose constitutions are not up to the standard of health? The results of sickness and death amongst abstainers will bear honourable comparison with any class of wine-drinkers.

The *Practitioner* adds that no other wines which the world produces are capable of yielding, day after day, such *unvaried pleasure to the palate* as the sound ordinary wines of Bordeaux and of the Rhine. If wine is drunk merely to please the palate and to produce the effects of intoxication, then we can offer some excuse for its popularity; but if the maximum of health is only to be attained by drinking wine, then we, as abstainers, know not what is a healthy condition of body. Moreover, we have had hundreds of patients under our care—patients who have drunk moderately of light wines for years—whose only hope of enjoying robust health was entire abstinence from Bordeaux and every other wine. If the body is in health, how, or by what physiological action, can the daily consumption of wine make it healthier? This point, says the editor, will be explained more fully in further chapters; but, at the same time, he admits that the vigorous frame and perfect digestion of a healthy young or middle-aged person require but a moderate daily allowance of alcohol to assist functional activity. If functional activity requires assisting, can the person be said to be in a healthy condition? If the latter, he requires no such assistance; if the former, is a bottle of wine the best restorative? Various are the opinions of medical men upon this subject of the administration of stimulants in health and disease; but opinions, without evidence, facts, or reason, fail to convince the scientific inquirer after truth.

The *Practitioner* lays great stress upon sugar as an ingredient of wine for persons in ordinary health, as there are the greatest possible differences between the respective capabilities of different persons, equally healthy in appearance, to digest saccharine wines. Dr. Dupré's analyses of four clarets show the amount of sugar to range from 11.40 grains to 51.62 grains per bottle. The analyses of four sherries to range from 217.2 grains to 421.2 grains per bottle. The analyses of four ports to range from 121.20 grains to 519.72 per bottle. The natural wines of the Rhine to range from 1.44 grains to 8.64 grains per bottle. A question then arises, whether the injection of the third or half ounce of sugar in their

wine has a deleterious influence upon persons in what would ordinarily be called health. (1) Evidence has been adduced by various writers to show that the saccharine and sugar-making ingredients of food are apt to occasion excessive deposit of fat in the cellular tissues; but the amount of sugar introduced into the body by the moderate use of saccharine wines is trifling compared with the supplies furnished by ordinary food. (2) The tendency to gouty affections is increased by a saccharine ingredient being added to alcoholic drinks. Dr. Garrod says that the saccharine element of alcoholic liquors has never yet been proved to be the *only* element in provoking the disease; for even the "driest" sherry will often appear to excite gout in a predisposed individual. The *Practitioner* questions the accuracy of this assertion; and supposes that a trifling disturbance of digestion might be sufficient to bring on a fit of the gout, which even so innocent a fluid as dry sherry might produce; but we can add our testimony to the truthfulness of Dr. Garrod's statement, having suffered several times from an attack of gout from the use of light dry sherry containing only a small quantity of saccharine matter. If the sherry produced the indigestion and the indigestion produced the gout, would it not be the safer and wiser plan to omit the use of such a drink?

The editor, determined to follow out his prescription of alcohol, recommends that, if wines disagree, the patient should take very weak cold spirits and water, carefully bearing in mind that, though when used in moderation, alcohol does not appear to be a gout producer. This is not the experience of those who have suffered from attacks of gout, nor yet the experience of medical men who have attended a great number of persons afflicted with this malady. We know, from personal experience, that alcohol, in any form, either as wine, beer, or cold spirits and water, will readily produce an attack of the gout to those predisposed; and that persons, so suffering, abstaining from its use, have not only experienced less frequent attacks, but have, after a time, freed themselves almost entirely from the disease.

The *Practitioner* admits that in the present state of our knowledge of the chemistry of digestion, the tendency of sugar to "turn acid" on the stomach is very much heightened when the substance is given in combination with alcohol. This is the case even if it is taken with a plain spirit like gin; but the mischief is still further heightened in the case of wines, since all wines contain a considerable proportion of both fixed and volatile acids. If sugar, which enters so largely into the diet of every one, turns acid on the stomach, how does the editor reconcile himself to the fact that, to sustain health, a person must drink a quantity of alcohol daily, which, by his own admission, heightens the mis-

chief, especially when wines are used which in addition contain a large proportion of fixed acids? If saccharine ingredients do turn sour on the stomach, occasioning flatulence and indigestion, is it sound practice to increase that acidity by the use of alcohol in any form; or would it not be better to ignore the use of alcohol altogether?

The natural acidity of wines, says the editor, needs consideration in reference to their use as beverages. The following are the figures given by Dr. Dupré for the principal wines:—In four red bordeaux, the quantities of free acid ranged from 72·96 grains to 77·40 grains per bottle respectively. In four samples of hock, the total free acids ranged from 57·60 grains to 70·32 grains per bottle. In three samples of Hungarian wine, the total free acids ranged from 80·16 grains to 85·92 grains per bottle. In four sherries, the total free acids ranged from 54·48 grains to 61·16 grains per bottle. In four ports, the total free acids ranged from 49·56 grains to 62·16 grains per bottle.

When the free acid constituents are analysed they are found to be made up of three principal ingredients, viz. malic, tartaric and acetic acids, with a small proportion of several volatile acids closely akin to the latter important ingredients in flavour and bouquet. The two principal acids, malic and tartaric, are the direct product of the grape juice, the former preponderating; they are fixed or non-volatile. The acetic and other volatile acids are the consequence of fermentation, and of the slower oxidising processes which go on after fermentation.

The closing remarks of the editor are worthy of the reader's consideration. Whatever may be ultimately shown to be the true origin of the gouty and other allied forms of dyspepsia, it can scarcely be doubted that one of their most important phenomena is an interference with the normally rapid rate of absorption of saccharine matters from the stomach, or that the presence of alcohol (especially alcohol of some strength) would increase this delay of the sugar absorption. That under these circumstances fermentive changes, with abnormal formation of acid and irritant matters, would occur in the stomach, seems highly probable. It is very difficult to believe that the trifling proportion of fixed and volatile acids, present in any drinkable wine, would be sufficient to disturb digestion save in persons of exceptional sensitiveness; one has only to remember the quantities of malic and tartaric acid which every one swallows during the fruit season to perceive how extremely improbable it is that a wine containing not more than 6 per 1,000 total free acids should, from *that* cause, disturb the digestion of any moderate drinker of it. This is the conclusion we have long since arrived at—that large quantities of malic and tartaric acids may not only be swallowed with impunity but

with great benefit to the system. Take even a less quantity of these acids in combination with alcohol, or in the form of wine, and dyspepsia, gout, flatulency, and other diseases of disordered digestion, are the natural after-consequences.

Our criticism of these papers will be continued in a future number of this journal.



### DR. PARKES'S EXPERIMENTS ON ALCOHOL.\*

WE gave a notice of these experiments, extracted from "Nature," in the *Medical Temperance Journal* for July, and have now, through the kindness of Dr. Parkes, received a copy of his paper, extracted from the Proceedings of the Royal Society (No. CXX. 1870). The object of these experiments was to solve some of the interesting problems relating to the effects of alcohol, about which there is great difference of opinion. When we consider the enormous quantities of alcohol used in this country as an article of diet and as a medicine, and the great evils which flow from its use, we feel the deepest interest in all efforts to discover and make known its properties. The subject of these experiments was an intelligent healthy soldier of medium height and weight. The experiments extended over five periods of time. The diet, as to food, was precisely the same during the whole of the time; but, for drink, the first eight days the man had water or tea and coffee, the next six days he took alcohol, and then for six days he took watery drinks only; then for three days he had brandy; and during the last three days he had water only. Every precaution was taken in order that the effects of the alcohol might be clearly ascertained. The food he consumed was analysed and the strength of the rectified spirit and brandy correctly estimated, so that the amount of absolute alcohol used was known. The man was weighed every day without his clothes, with a machine which turns with one ounce avoirdupois. The temperature of his body and the state of his pulse were taken every two hours during the day, and all his excretions were analysed. The experiments were most carefully performed, and the conclusions are highly important. It appears that the alcohol did not produce any noticeable difference in the weight of the man; that the temperature

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\* "Experiments on the Effects of Alcohol (Ethyl Alcohol) on the Human Body." By E. A. Parkes, M.D., F.R.S., Professor of Hygiene in the Army Medical School, and Count Cyprian Wollowicz, M.D., Assistant Surgeon, Army Medical Staff.

was very slightly altered by the alcohol, and certainly not reduced by it. This is opposed to the results obtained by other experimentalists, and does not support the idea of Professor Binz that "alcohol is frequently called upon to act as a preservative of life by its antipyretic properties." A few months ago we were taught that alcohol reduced the temperature of the body; but now it seems that, on the contrary, it causes a slight increase. Of course, the point is not yet finally settled.

The elimination of alcohol is one of the vexed questions which requires investigation. When alcohol is taken into the body, is it wholly eliminated in an unchanged state? After the experiments of Lallemand, Perrin, Edward Smith, and others, it was assumed that the whole of the alcohol was thrown out. But Drs. Anstie, Thudicum, Dupré, and others, have contended that, so far from the whole passing out of the body, it is only a small part which is given off. Their experiments, however, being confined to the renal excretions, are certainly not sufficient to establish their view of the case. The *Lancet* endeavours to maintain Dr. Anstie's opinion that the greater part of the alcohol is destroyed in the body, and only a very small part escapes. As a sample of the *Lancet's* ideas of experimental investigation, we give the following extract from that journal as a curiosity:—

"Let any one drink half a bottle of strong port in the course of half an hour, and then set himself to the exercise of running rapidly up and down a long room, or vaulting over bars; and let him collect the sweat which pours off him and submit it to distillation. He will avoid the otherwise inevitable narcotism, but he will find only the most trifling evidences of elimination by the channel of the skin, and if he also examines his breath, by passing it through a test solution of chromic acid, he will find nothing to warrant the belief that the lungs are doing a large work of elimination."

The *Lancet* does not tell us how any one is to collect the sweat and test the breath while he is taking the exercise; after the exercise is over it may be too late, for the alcohol may be lost. The only way finally to decide this question of elimination is by a correct analysis of all the excreta for a considerable period of time, and not by merely examining one of the excretions. Dr. Parkes and Count Wollowicz found that alcohol was eliminated by the lungs, and they say that it can hardly be doubted that in twenty-four hours there must be a good deal of elimination by this channel; that the skin is a considerable emunctory of alcohol, perhaps more so than the lungs; and that the quantity passing off by the kidneys was not large. They say:—

"The evidence of Anstie and Dupré is certainly strong against the urine being a great channel of elimination; but possibly, though not excessive at one time, the exit is longer continued than they supposed; and when the constant passage from the skin and from the lungs and bowels is remembered, we can

easily suppose that the totality of elimination may be really considerable. But whether all the alcohol thus passes off, or whether some is destroyed, our experiments do not enable us to state."

The alcohol appeared to exert very little influence upon the urinary or alvine excretions, nor does it seem from these experiments that it either promoted or retarded the metamorphosis of tissue. Small doses of alcohol, such as one or two ounces in twenty-four hours, increased the appetite, but larger quantities almost entirely destroyed it. We have ourselves seen this repeatedly; and, in the case of the sick and weak, we have seen the appetite destroyed by what to healthy persons would seem very small doses of wine or bitter beer. This power of alcohol to destroy the appetite for food properly so called renders its use in sickness fraught with great danger, for ignorant nurses and kind-hearted friends are ever ready to press alcoholic liquors upon the sick.

The most striking effect of alcohol, as brought out in these experiments, was upon the circulation, and its power to derange the action of the heart was clearly shown:—

"The average number of beats of the heart in twenty-four hours (as calculated from eight observations made in fourteen hours), during the first or water period, was 106,000; in the alcoholic it was 127,000, or about 21,000 more; and in the brandy period it was 131,000, or 25,000 more."

In the water period, the man's heart was in a natural healthy state:—

"The highest mean pulse on any day before alcohol was 77·5 beats; the mean pulse of the first alcoholic day (one fluid ounce of alcohol) was 80; with two ounces of alcohol, 78·3; with four ounces, 86; with six ounces, 98·3 (but there was exceptional fever); with eight ounces, 93·6; and on the last day with eight ounces, 94·7. On the first day after alcohol it sank to 80."

Thus, during the alcoholic period, the heart was doing more than a natural, *i.e.* healthy, quantity of work:—

"The heart during the alcoholic period did daily work in excess equal to lifting 15·8 tons one foot; and in the last two days did extra work to the amount of 24 tons lifted as far."

The *Lancet*, in a leading article, says that the great importance of these experiments, as a piece of physiological research, "consists in the remarkably negative character of the results brought out: these, it may be said, will be equally unwelcome to the teetotaler on the one hand, and the extreme advocate of alcohol on the other." We are sure that the teetotaler ought to be satisfied with the results of these experiments. Before commencing the experiments, the man, who had been in the habit of taking one or two pints of beer daily, abstained altogether from any alcoholic

liquor for ten days, and retained his health; so that when the experiments commenced he was in good health, and continued so all the time he abstained from alcohol. Dr. Parkes and Count Wollowicz say:—

“It is quite obvious that alcohol is not necessary for him; that is, that every function of life was perfectly performed without alcohol, and that even one ounce in twenty-four hours produced a decided effect upon his heart, which was not necessary for his health, and perhaps, if the effect continued, would eventually lead to alterations in circulation, and to degeneration of tissue.”

Here there is proof of the safety of abstinence and of the injurious tendency of the moderate use of alcohol. What more can a teetotaler expect physiological investigation to prove? Dr. Parkes and Count Wollowicz say:—

“In spite of our previous experience in the use of alcohol and brandy, we were hardly prepared for the ease with which appetite may be destroyed, the heart unduly excited, and the capillary circulation improperly increased. Considering its daily and almost universal use, there is no agent which seems to us to require more caution and more skill to obtain the good and to avoid the evil which its use entails.”

We are thankful for these researches, and hope that others will follow up the investigation. There is ample room for more truth seekers; and we believe that the more the subject is canvassed,—the plainer will appear the absurdity of the common dietetic and so-called medical uses of alcohol.



## A COMMON FALLACY REFUTED.

THE Literary Lounger of the *Illustrated Times*, Aug. 8th, criticises, in a brief but kindly notice of the *Medical Temperance Journal*, what he regards as the fallacies of teetotalers. He says that these abstemious people, even when intelligent and candid, fail to catch the point; nobody doubts that healthy persons, placed in comfortable circumstances, will do well without stimulants. “But the case is very different with a hard-worked person, living in a close city, under evil conditions, and compelled to make all kinds of trying exertions at unexpected times.” Now our critic is very unfortunate in the case he projects. It is under conditions such as these that the use of alcoholic liquors is especially to be deprecated. People are apt to make the use of an artificial stimulant take the place of the natural ones—exercise, air, and ablution. Where men following sedentary occupations “are hard worked, living in a close city, under evil conditions,” it is especially necessary that they

should daily pedestrianise to a considerable extent. Without a fair amount of outdoor exercise, there is not the relish for the food needful to build up the wasting tissues, nor for the water which should carry the elements of nutrition thereto, or the elements of detrition therefrom, nor is sufficient oxygen inspired to complete the cycle of chemical changes; physical vigour is wanting, sleep is unsound, waking unrefreshed.

Now if a man thinks that, when he is wearied and depressed, he can regain his elasticity, create a relish for food, banish gloom and care without the trouble of physical exertion and the expenditure of time, he is only too ready to snatch at the means. Hence men throw themselves into an easy chair, and having tossed off a glass of brandy and water, and inhaled the sedative fumes of the Indian weed, feel refreshed and invigorated. But wine is a mocker—the exhilaration it produces is forced and artificial. Nature resents the counterfeit attempted to be palmed upon her, and scores up the debt with a heavy percentage of interest, both of which she inexorably exacts sooner or later.

The man “who is compelled to make all kinds of trying exertions at unexpected times,” if a reflective and intelligent being, will—like an athlete who is liable to be suddenly called upon to put forth his greatest strength—keep himself in the best condition. But trainers well know that this is incompatible with the use of stimulants. As with the physical athlete so with the mental. Mr. Cobden was accustomed to say, “When I have work to do, I avoid wine and stick to the pump.” The human system has a wonderful power of adaptation and of recuperation if its reactive tendencies are not interfered with. Many teetotalers who are City men know well that when they made wine their sheet-anchor in the stress of labour, their condition next day was very inferior to what they found it when going through the same amount of grinding toil, drinking no stronger a beverage than tea.

But the “Lounger” thinks that, “If a man had to make a sudden run for his life, and was near fainting, a drop of brandy might just enable him to get through the last spurt of the struggle.” Now, although the writer states that “this is exactly the case with most of us,” we must respectfully venture to dissent, and assert that such a state of things is so extremely rare and exceptional as, though the statement were correct, to offer no valid objection to total abstinence as a rule of life. Even if a man were placed in circumstances where he had to make a sudden run for his life, and were near fainting, alcohol has no important advantage over the cup which cheers but not inebriates. We have seen a poor creature, the victim of

a frightful accident, faint from agony and loss of blood, crave for tea in preference to brandy. We have, after a day's excessive toil, walking over a wild hilly district in bad weather, experienced rapid relief from painful fatigue after two or three cups of tea, and been so much refreshed and exhilarated, that we should not have feared had we had to repeat the task. If either the whip or spur must be used, true wisdom would employ the whip (as least injurious), and that as sparingly as possible.

Our critic assures us that it is vain to attempt to disprove what he has seen more than once, namely, "the effects of the stronger wines and malt liquors, especially stout, in getting up flesh in a person thinned by illness." Now, considering the shocking fabrications which are sold under the names of wines and beer, and considering that we often see persons, who have taken little physic and less stimulant, becoming stronger and stouter after their illness than they were before, we must hesitate in crediting these alcoholics with all the good effected, and be permitted to indulge a doubt as to whether *post hoc* is really related to *propter hoc*.

Alcoholic liquor, we are told, "supplies a genial stimulus to the nervous system." Now here is the point which some wise drinkers, even when candid and intelligent, fail to catch. They fail to recognise that which is in reality the most important aspect of the question—the moral dangers associated with the use of alcoholic stimulants. In proportion to the agreeableness of the sensations excited by wine and other alcoholics, is the tendency to recur to their use. But the frequent use almost inevitably begets a craving, the craving an appetite, the appetite grows by what it feeds on. Many a hard-worked person, living under the conditions described by our critic, has been not only physically injured, but morally ruined, by seeking in an alcoholic stimulant the relief which he should have sought in hygienic means. We repeat the warning of the wise man, Wine is a mocker; and in proportion to the genial stimulus to the nervous system excited by it, is the danger associated with its use. Many a man and many a woman date their ruin from the genial stimulus recommended by the medical adviser during convalescence. The carking care, the sense of weariness, the malaise attendant on recovery from illness, can be relieved by opium in some of its forms. The pain may be displaced by most agreeable sensations, but every conscientious medical man would shrink from recommending an article, the use of which might lead to the formation of what might be a most pernicious habit; better that the patient endure some discomfort than dose himself with a drug exercising, in virtue of its genial agreeable qualities, a bewitching, infatuating and enslaving effect. We do not deny the

genial stimulus given by wine, but we recognise the dangerous influence it exercises in many cases; and abundant experience proves that, as a rule, the illness is shorter, convalescence more rapid, in proportion as little or no wine or stout is given.



## DRINKING IN METROPOLITAN WORKHOUSES.

THE January number of the *Medical Temperance Journal* contained an article on "Strong Drink in Hospitals," in which the great difference in the quantity consumed in two of our largest hospitals was pointed out, and the necessity for inquiry and reform was insisted on. There is the same indiscriminate use of alcoholic liquors in workhouses as in hospitals, and the same necessity for reformation. In a return ordered to be printed by the House of Commons on the 13th of July, 1870, there is an account of the number of inmates in thirty-six of the Metropolitan workhouses, and the amount expended in beer, wine, and spirits for each workhouse in the year ending Lady-day, 1869. The facts revealed in this document demand the serious attention of statesmen, ratepayers, and temperance reformers. It appears that there is not the slightest approach to uniformity in the quantity of alcoholic liquors consumed in the workhouses. Whether the use of these liquors depends upon the caprice or the ignorance of the medical officers, it is not for us to say, but it is perfectly clear that there is no scientific principle in their use. If these liquors are prescribed as medicines there must be some extraordinary difference in the number and character of the diseases in the workhouses. For instance, gin is used at thirty-five of these houses, but at one house none of the money drawn from the pockets of the ratepayers is expended in gin. We should like to know how it is that at one workhouse there are none of the diseases requiring gin, whilst at the thirty-five others there is a large sum of money spent in this liquid. Another curious fact is, that at one workhouse, in addition to brandy and gin, £21 12s. 3d. was expended in whiskey, whilst at the thirty-five other workhouses no whiskey was used. Was it owing to the superior medical knowledge of the medical officer that the inmates of this one house had whiskey? or was it owing to the inmates of this particular establishment having some peculiar disease for which whiskey is the appropriate specific? There is another curious case: at one workhouse, in addition to brandy and gin, rum was used. Here we are again puzzled; only at one out of the thirty-six workhouses was rum required. What could be the reason

why rum should be necessary at one workhouse and unnecessary at the other thirty-five? The amount of money expended in beer, wine, and spirits, does not appear to bear any definite relation to the number of the inmates who consume the liquors, and we think no member of parliament, no thinking man indeed of any class of society, and certainly no ratepayer, can read the account of the money spent in strong drink for the use of the inmates in the workhouses without coming to our opinion, that there is great need for a searching inquiry and a radical reform. We give the amount expended at some of these workhouses as a sample. The same want of relation between the number of inmates and the quantity of intoxicating liquor consumed, exists at the others:—

	No. of Inmates	Beer.			Wine.			Brandy.			Whiskey			Gin.			Rum.		
		£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Bermondsey	551	125	8	0	71	10	0	2	8	0	...	...	...	...	...	...	...	...	...
Rotherhithe	225	251	17	7	43	19	11	42	6	11	21	12	3	25	5	6½	...	...	...
Paddington	476	482	12	3½	86	1	0	56	7	3½	...	...	...	32	10	6	21	4	1½
Hampstead	160	181	19	6	69	16	0	10	2	0	...	...	...	107	16	0	...	...	...

These figures speak for themselves. Thus Rotherhithe, with less than half the number of inmates of Bermondsey, spends nearly twice as much in intoxicating drink; and the disparity between the number of inmates in Hampstead and Rotherhithe workhouses, and the money expended in beer, wine and spirits, is still greater. It is perfectly clear that there is something radically unsound in the workhouse system of alcoholic medication, and that, if these liquors are really necessary as medicines, they are used either too sparingly in some of the workhouses, or too extravagantly in the others.



## GOOD ADVICE TO THE DOCTORS.

THERE are various ways of shortening life. Some are so plain that anybody may see them, and others are so shameful that public opinion condemns them. But there are methods of curtail- ing the duration of life which may be followed without being noticed, or without incurring censure. One common and respectable(?) way of producing premature old age and death is by the use of what are called stimulants—by goading the brain and nerves to the performance of more work than they are naturally fitted for. This may be called *living fast*, and *living fast* when rightly understood means *dying soon*. Dr. Hufeland, in his “Art of Pro-

longing Life," says, "He who in a day consumes twice as much of the vital power as another will exhaust his stock sooner; and organs used with double force will in half the time be worn out and become useless." But at the present time stimulation, excitement, overwork, is the order of proceeding. *Fast life* is no longer confined to the dissolute and intemperate. It is to be found in all circles of society, especially among brain-workers. Every day we see the effects of this *fast life*; and whilst we are endeavouring to preserve the lives of the people by various sanitary reforms, we see that after men reach thirty years of age the expectation of life is less for the educated and professional classes than for the agricultural labourers. Thus there are other agencies for shortening life, besides physical toil, poor diet, ill-constructed houses, want of ventilation and cleanliness. And even medical men, with all their knowledge of physiology and the laws of health, are a short-lived race. The *Lancet* of July 16th contained an excellent paper by J. Henry Bennet, M.D., on the question, "Why do we die prematurely?" The reasoning in the paper is specially addressed to the medical profession; but like causes produce like effects, and the same influences which shorten the lives of the profession are in operation in other classes of society. Can this waste of life be prevented? Dr. Bennet says:—

"I think myself that it might, if we would cease to live as if we were immortal, as if the diseases we saw daily did not pertain to us; if we would listen to the teachings of physiology, and discard the miserable vanity of thinking that we are exceptions to the general rule, and that at fifty or sixty we are as young and strong as at thirty or forty. To accept this lesson, however, we must analyse ourselves, and, if we find ourselves wanting in vital power, thrust aside the scarlet cloak of nerve stimulants—alcohol, coffee, tea—by means of which, I believe, it is that efforts inconsistent with real vital and nutritive power are made by workers in general, and by medical men amongst the number.

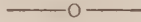
"A man who meets age, or debility, or want of constitutional power by alcoholic stimulants, even in moderation, by coffee and tea, conceals his real nutritive condition from himself. When both the nervous and muscular systems are exhausted, and want repairing by legitimate nutrition—by beef, mutton, bread, and rest,—a man may galvanise his economy by nerve stimulants so as to be equal to nearly anything up to the last. But the process is a destructive one, exhausts vital power, impairs healthy nutrition, and lays the foundation for morbid organic changes.

"By alcoholic stimulants, constantly repeated whenever exhaustion supervenes, the power of work may be supported until within a few days or hours of death, as we constantly see in the lower classes of life. Tea and coffee have nearly as great an apparent nerve-stimulating, strength-supporting power. Let any one who doubts it take a cup of strong tea or coffee when exhausted from want of food and from physical fatigue. The craving for nutritive elements to repair waste, and the sense of fatigue, both disappear in ten minutes, and a couple of hours' more abstinence and work are easily borne. But what have we done? The physical organisation wanted repair, wanted the elements of nutrition, the nervous system rest, and we do worse than give them a stone, for we flog them, we galvanise them, into continued action."

The difference between food, properly so called, and nerve stimulants is very great; the former excite and nourish, the latter excite and exhaust. Dr. Anstie, in a paper on stimulants, called common food the *typical stimulant*; it is in fact what corn is to the horse. It is food that furnishes force, and when workers of muscle and brain learn to prefer nutritives to excitants, we may hope to see the present waste of life prevented.



## Miscellaneous Communications.



### BREAKFAST TO MEMBERS OF THE BRITISH MEDICAL ASSOCIATION.

IN connection with the annual meeting of the British Medical Association, held at Newcastle-upon-Tyne, Mr. Samuel Bowly, President of the National Temperance League, and the Rev. Principal McAll, a vice-president, invited the members to breakfast on Thursday morning, 11th August, at the "Queen's Head Inn," Pilgrim Street. About eighty responded to the invitation, including the Sheriff of Newcastle, Mr. Jonathan Hutchinson, Mr. Ernest A. Hart, Dr. Protheroe Smith, Dr. A. Clark, Dr. W. Wood, Dr. Reeves, Dr. Wiltshire, Dr. Elliott, Mr. Luke Armstrong, Mr. Albert Napier, Mr. H. Ridley, Dr. Cossar, Dr. J. Macaulay, Mr. W. S. Watson, Dr. A. E. Sansom, Mr. J. E. Burton, Mr. R. Ellis, Dr. Couper, Dr. Fenwick, Mr. W. J. Davison, Dr. F. W. Newcombe, Dr. Embleton, Mr. W. C. Blackett, Mr. W. R. Shiell, Dr. R. D. Lynn, Mr. A. Bell, Dr. Fothergill, Dr. MacLachlan, Dr. Stewart, Dr. De Mey, Mr. Reg. Harrison, Dr. F. Jordan, Dr. Stuart, Mr. J. W. Blandford, Mr. W. Anderson, Mr. Thomas Chambers, Mr. E. W. Witten, Dr. Rutherford, Dr. J. C. Murray, Mr. R. Clarke, Dr. W. M. Kelly, Dr. Waller, Mr. D. C. MacVail, Dr. Hill, Dr. Crossby, Dr. Ward, Dr. Atkinson, Dr.

Hugh Miller, Dr. Renfrew, Dr. D. C. Black, Dr. Appleton, Mr. N. Hardcastle, Mr. H. J. Knight, Dr. A. Aitchison, Mr. F. F. Welsh, Mr. Thomas Underhill, Dr. Hayden, Mr. John Sang, Dr. Tiffen, Dr. Stanley Haynes, Dr. Dalziel, Dr. Evans, Dr. Havell, Mr. F. M. Corner, &c. After breakfast,

Mr. BOWLY, who occupied the chair on the occasion, thanked those present for the honour conferred on himself and his colleague by the ready acceptance of the invitations issued. The organisation of which he was president was endeavouring to remove, as far as possible, the evil of intemperance—of drinking and drunkenness—which all admitted was rife in this country. The system through which the National Temperance League sought to effect its object was moral suasion. He would never be forced himself to accept what he might object to, and he would not like to force other people. (Hear, hear.) It must be a matter of conviction and belief how they could best attempt the cure of any great evil, and nobody knew more of this special evil than medical men. He knew, also, that many medical men sympathised very much with the sufferings which fell upon the homes of working people—upon the wives

and children of drunkards. All present must have arrived at the conclusion—looking at the condition of the people, and the way in which intoxicating drinks were sold—that it was almost impossible to train the masses of the people to drink in moderation. The working men themselves began the total abstinence movement thirty years ago, and he himself had adopted the same principles for as long a period. He joined the movement contrary to his own interest. His brother was a brewer, and he tried to sell his beer as he (Mr. Bowly) tried to prevent such sale. Everybody carried on business for the sake of getting money, and while the trade in intoxicating liquors existed all the people concerned in it would not be of the best moral character. The experience of medical men showed that a very large number of people fell victims to drink. The present generation of drunkards had become so since he (the speaker) had become an abstainer. They had become drunkards in spite of themselves, and they knew the evils of drinking better than any one could tell them. Some people seemed to think there was a broad line between temperance and intemperance, but it was impossible to say when the safe line had been passed. He had had a great deal to do with working men himself. One employer of labour had told him that out of the 150 men in his establishment, fifty were total abstainers. That employer also averred that on the whole the total abstainers were the best men he had. He (Mr. Bowly) had never drunk much himself, and he had not, before he became a total abstainer, taken a very strong view of the physical bearings of the question, but he had found that a large number of persons he had known had fallen into drinking habits, and he resolved to abstain. At the period he adopted total abstinence principles, he did so contrary to medical advice. He had been told to take wine to quicken a languid circulation. But he was now a total abstainer of thirty-five years' standing, and he could say he was a stronger and heartier man at the present time, than when he left off

the use of intoxicating liquors. At sixty years of age he could do a larger amount of work than he could before he became an abstainer. He could enjoy life better. For the last thirty years he had been speaking almost every day, and at the present moment he was in the possession of most-vigorous health. That was his experience. The insurance office with which he was connected had a membership of 30,000. Of that number 10,000 were total abstainers, and 20,000 moderate drinkers, but the total abstainers' section enjoyed greater pecuniary advantages than the other. That society never took a man who sold intoxicating liquors. He did not wish, however, to go into the physical bearings of temperance, though the late Dr. Forbes had remarked that the country was indebted a great deal to temperance reformers for their experience on this question. He appealed to the medical profession on moral and social grounds. He knew that many medical men prescribed alcoholic liquors to ailing people, but there was no occasion for people to take that medicine all their lives. Temperance advocates said, therefore, that the medical question ought to be left a good deal in the hands of medical men themselves. Most people deplored the evils of drunkenness; but there were thousands of persons who had done an immense amount of injury to their health by drinking who were never drunk. He had known tradesmen who were always drinking, but never got drunk. The exciting effect of strong drink upon young people was much to be deplored. All knew the great temptations young men had to indulge in drink. An Oxford proctor had told him some time ago that half the punishments inflicted upon students resulted from drinking, not drunkenness. It seemed to him, therefore, that total abstinence was the only remedy that would fully reach the evil of drinking. How far the medical gentlemen he saw around him were prepared to accept that opinion he did not know, but he and his colleague might ask them how far they were prepared to help in getting rid of this great evil.

If they would not go all the way with total abstinens, perhaps they would go half way. (Hear, hear.) It was a very hard matter indeed to get people to attend meetings called for the promotion of total abstinence. There was a great deal of ignorance on the subject, but when persons did attend they generally went away with a good opinion of the movement. He did not expect people to put wine off their tables all at once. In his own case he soon banished the beverage from his table, and he knew from experience that nobody would find much difficulty in good society in declining to taste alcoholic liquors. He was quite satisfied that those who felt they could not perhaps go so far as he and his friends might wish, yet might go far enough to help to cultivate a good public opinion on the subject. Still, people in the kitchen could hardly be asked to give up beer, until those in the parlour gave up wine, and he was sometimes much astonished at Christian gentlemen who allowed a glass of wine to prevent them from doing what they could to promote the social reformation of the country. He was aware, however, that one of the greatest difficulties to contend against was the drinking customs of society, and the evil habits of the people. But customs changed very much, and he was sure they would ultimately get to that point when temperance reformers would be rewarded for their work. Mr. Bowly concluded by remarking that he and his friends had ventured to ask the guests assembled to meet them in the hope that one another's hands might be strengthened thereby. He did not believe himself that this temperance question would do everything for the regeneration of the people, but he appealed that day to medical men, and invited a friendly discussion on the merits of total abstinence. (Applause.)

Dr. W. WOOD, of London, said he felt really gratified at the kind way in which he and his brother practitioners had been treated by their hosts, and at the very temperate and philosophical manner in which Mr. Bowly had spoken on the subject of tem-

perance. He himself, he owned, had seen a great deal of the dreadful effects of the drinking habits of the working classes. He was at present physician to St. Luke's Hospital, and at a former period of his life had been professionally connected with Bethlehem Hospital, and consequently had had more opportunities than most people of knowing the evils resulting from intemperance. His father, he might mention, had been a soldier, but did not begin married life till after Waterloo. His father grew up with all the habits of that day; but he, his son, had never seen him in the least degree the worse for drink, for habit enabled him to partake pretty freely. He (the speaker) could not help but observe when he was young the many evils which resulted from the habit of drinking, and he early formed the determination not to drink much. He saw enough to satisfy himself that it would be wise on his part not to fall into the habit. He must confess that at the present time it was his habit to take a glass of wine daily to dinner. Of course he knew he could do without it, though he was also bound to say he could not do so well without it. He admitted that there was a great deal of force in what Mr. Bowly had said about there being no middle course. The same might be said with respect to the abolition of restraint in cases of insanity. He could not say, indeed, that there were not cases in which restraint was desirable. He believed there were occasions where the abolition of restraint was an evil, but he believed it was a lesser evil than the continuance of it. It was a choice of evils, and of the two he thought the abolition was the less. For the same reasons, regarding intoxicating drinks, he thought they had a choice of evils. He believed it would be an evil to abolish the use of strong drinks, but he acknowledged it would be a greater evil to continue them. With regard to a certain class of persons, he believed there was no alternative but to press them to abstain altogether. That seemed a little inconsistent, he admitted, and therefore he could not help respecting and

esteeming cordially those who possessed the gift of standing forward before their fellow-men and setting them an example. Of course that involved some considerable sacrifice. As the result of a family arrangement, he came to be indirectly connected with working men; he took thereby a personal interest in somewhere about one hundred workmen. It constantly happened, he found by experience, that the very best workmen were among the most intemperate. One of the best workmen in the establishment he alluded to had been borne with for years because of his superior abilities, though he was a drunkard. But at last the firm was obliged to part with him, for example went a long way in a workshop. Subsequently, the moral tone of the shop had been improved by the absence of the one man; for if example was powerful for ill, it was also powerful for good. (Hear, hear.) The question might then be asked, Could not medical men set an example with respect to the disuse of intoxicating liquors? He himself wished he was able to follow the example of his respected host in the chair. But the chairman forgot that medical men were not in an independent position. Medical men wanted something to keep them going. They were frequently oppressed with labour and fatigue, and but for an occasional glass of wine would flag and not be able to do their duty. All that ought to be taken into account. The speaker concluded by remarking that after what they had all heard from the chairman, they would be more disposed to promote the interests of the League than before.

Dr. J. P. SCATCLIFF, of London, referred to what had been said by the chairman with reference to pushing trade. As medical men, they did not wish to push their trade. They cured people as quickly as they could. He thought he might say that all medical men were agreed that every person in a state of perfect health did not require alcoholic drink. That being so, it was imperatively necessary that medical men should be careful to let their patients know that such drinks

were only to be continued for a certain time. The better plan would be for medical men to supply the doses of alcoholic drink themselves to patients, labelling the bottles, "three table-spoonfuls three times a day," and so on. But medical men generally said to their patients, "Take a glass of wine a day"; and they found that people were very ready to follow that advice. But was the latter policy for the people's good? He remembered having had at one time four cases of disease under his care, all brought on by the habitual use of intoxicating drinks. He had occasion once to attend the case of an old lady, in consultation with another physician. It was apparent that the lady could not recover, and his eminent colleague on that occasion said to the daughter, "I fear your poor mother has been addicted to drinking lately." The reply of the daughter was, "It cannot be so, doctor; for you yourself, fourteen years ago, ordered her to take a glass of whisky-and-water a day; and she has taken it ever since. It cannot possibly be that which has injured her." His medical friend was "shut up," and could not say another word about the matter. He (the speaker) had been twenty-six years in practice. He had had a large practice in London among the middle and lower classes; and had been a practical abstainer, though not a pledged one, all his life. He had never been under the influence of drink at all, and could bear his testimony to what could be done without it. Alcoholic prescriptions, he considered, ought to be very carefully defined. (Hear, hear.)

Dr. STANLEY HAYNES, of Salisbury, said very great good might result from that conference; and many of the medical men present would probably go away with their former ideas considerably shaken with regard to the use of alcoholic stimulants. During the last session of Parliament, a bill entitled "The Habitual Drunkards Bill" had been read for the first time in the House of Commons. Next session it would be brought forward again, introduced by Mr. Dalrymple, Mr. Gordon, and Mr. Pease. The

bill was, in his opinion, a perfectly good one, and his chief reason for broaching the subject, was to ask the members of the Association to obtain copies of the bill and study it carefully, so that suggestions might be brought before its promoters.

Mr. UNDERHILL, of Tipton, remarked that he had been all his life much among the working classes, and though he acknowledged that the evils of intemperance were many, yet he could not help saying that, as a rule, temperance advocates were the most bigoted men in the world. He would give one instance of such bigotry. An employer of labour, a thoroughly temperate man, while in the last stage of typhoid fever, was visited by a temperance advocate, who told him that he must not taste wine, even as a medicine, for, said he, "it is the devil's drink, and you will go to hell if you take it." That was going to an extreme. Other advocates said that if a person was not a total abstainer, he was worse than a drunkard. He could not help expressing, therefore, his cordial thanks to Mr. Bowly, for the very moderate terms in which he had introduced the subject of discussion.

Mr. BOWLY said he deplored as much as anybody the violent advocacy of the cause. A good cause was often as much injured by friends as by enemies. But they must bear in mind that many of the advocates in question had been educated in public-houses, and had suffered a great deal through drink. Besides, that kind of advocacy had much decreased of late years. His greatest hope, however, was in the young, who would influence the next generation. Alluding to the fact that many persons who had been taking alcoholic liquors for the benefit of their health, had benefited more by leaving them off, he said he had lately met a gentleman who told him, in the course of conversation, that he had been suffering from poor health most of his life. His medical attendants advised him to take wine. On going on a visit to London, he found the wine at the hotel he stayed at anything but to his taste, and very dear, and gave up the use of that drink

for a time. At once he found himself rather better, and subsequently enjoyed robust health than he had for years. There were many such cases, but the customs of society were very difficult to overcome; still, he thought the medical profession was bound to do all it could to prevent the great evils of the drinking system, for it was wonderful what a change in the habits of the people for the better was effected by the removal of a single article of diet. (Applause.)

The SHERIFF of NEWCASTLE (Mr. Gregson) was the next speaker. He said they all owed many thanks to the chairman for the very able, eloquent, and amiable terms in which he had discussed the question before the audience. For his own part, he endorsed the sentiments of almost every speaker who had addressed them. Some years ago he professionally attended a very respectable tradesman of Newcastle, who was at times troubled with heart disease, and in the course of attendance held a consultation with a very eminent physician on the case. In the course of conversation, he (the speaker) said to the tradesman, "You are very free in your living." The patient resented the remark, and replied, "I would have you know, doctor, that I am very regular in my living. I very often take four glasses of brandy-and-water a day, and sometimes take a glass of porter upon that." My friend, the physician (Dr. Headlam), remarked, "My dear sir, you have been in a most dangerous position for years, and the least trouble will kill you." Need he say that the patient soon went where the course he had been running led him? The Sheriff next remarked that he had at a former period of his life spent a number of years in the East, and his experience there in hospitals led him to the conclusion that a thorough abstainer had more chance of getting successfully through an operation than a drinker. An abstainer might be cut as much as a doctor liked, and his recovery would always be rapid. With those remarks, he had great pleasure in proposing a vote of thanks to the chairman.

Mr. BOWLY said he was greatly cheered by the sentiments expressed at the meeting that morning, and they would help him to go on with renewed energy in the cause he had at heart. He reiterated the hope that many medical men present would be more disposed than hitherto to help himself and his friends in the temperance movement.

The Rev. Principal McALL, in compliance with the desire of the chairman, offered a few remarks. The advocates of temperance, he said, asked for a co-operation on the part of the medical profession which it might not be always easy to give, for it was notorious that people often consulted them with the secret hope that, under the colour of medicine, they might have stimulants they could not otherwise procure, and with the doctor's sanction, enjoy certain luxurious beverages beyond what their friends would approve. Under such circumstances, it would be strange indeed if there were no temptation to recommend what was known to be agreeable; and the consequence in too many cases was such as all must deplore. (Hear.) Let it not be supposed that, while advocating total abstinence, they depended upon it alone for the physical and social regeneration of the people. Their cause struggled under great disadvantages so long as there was so much need for sanitary reform. Overcrowded dwellings, undrained courts and alleys, fever-producing dirt and discomfort, late hours and exhausting toil—these and the like evils must be abated before temperance could have a fair chance. And in the work of sanitary reform the leaders of public opinion had ever been and must be the members of the medical profession. Often was it refreshing to see some individual in their ranks, perhaps a junior, regardless of his own interest, fighting single-handed against the apathy of Boards of Guardians, and parish vestries, and niggardly ratepayers, in favour of improvements urgently demanded by the public health, while the temperance advocates could easily put those ratepayers in the way of

saving far more than any of those improvements would cost. (Applause.) He would ask medical men to look with some indulgence on the more earnest, perhaps somewhat violent, advocates of the temperance cause. These persons were but half wrong at the most. It was impossible to overstate the evils of drunkenness, or to warn men too earnestly against whatever led to it. Here, at least, there could be no exaggeration; and if some had gone too far in saying that stimulants could never be useful in a temporary and exceptional way in cases of disease, surely they did not go too far in saying that they were unnecessary for persons in health. Besides, these over-eager friends were in the position of persons who had unexpectedly learnt a great secret. Having been nursed in the common belief that strong drinks, as they were called, were strength-giving drinks, and that life must be a precarious and almost a joyless thing without them, experience had proved that total abstinence had not lessened their strength, impaired their cheerfulness, or made them worse subjects for life insurance societies; and being now stronger and happier than before, no wonder if some were a little carried away—like men waking from an uneasy dream, or suddenly freed from chains. And now what they had to ask of medical men was, that if they held, as it was believed the majority of them did, the non-necessity of stimulants to persons in health, they would aid in removing the delusion under which society was labouring on this subject. They would greatly help the cause if they would make it clearly known that a good hearty kind of total abstinence brought with it no risk to the health; and if they would advise those who had adopted the plan to pause before, on the ground of some passing ailment or fancied debility, they laid it aside. Pure air, wholesome diet, regular hours, cheerful exercise, might be recommended in preference to drink, which none would say were wholly unattended with danger; and even in cases of sickness, might it not be wise even to retard somewhat the process

of recovery, or to leave the cure in a measure incomplete, if thereby the patient was kept at a safe distance from an evil whose effects none could sufficiently deplore? (Applause.)

Dr. DE MEY thought the last speaker had carried his point too far. He himself was a physician of forty years' standing, and his experience led him to believe that no medical man would shrink from doing his duty. It would be utterly impossible, he considered, to cure some patients if wine were not given them; wine was one of the most necessary remedies. He was sixty-seven years of age, and could still get through a great deal of mental labour. He certainly was in the habit of living as moderately as most men, but there were times when the flagging energies required a moderate glass of wine. A glass of wine did a man a great deal of good. Every man had reason given him by the Almighty, in order to discriminate between good and evil, and choose for himself. Total abstinence, he thought, was a total mistake. Many so-called abstainers from drink took one hundred drops of laudanum a day, and that was ten thousand times worse than taking a glass of wine. A certain amount of stimulating drink was necessary to the nature of man, but let them endeavour to impress upon the public at large that the abuse of intoxicating liquors was injurious to the system. A moderate amount of wine and brandy did a very great deal of good to the system. In the present state of society the nervous system was excited by mental toil, and a certain amount of wine gave nutriment to the system. The education and experience of a physician gave him power to judge of diseases, and when to administer wine and when not. But

any medical man who forgot his duty by indulging any fancy of his own or his patients, was not worthy the name of a practitioner. (Hear, hear.)

The Rev. Dr. RUTHERFORD, of Newcastle, said he owed it to a very large number of persons—temperance reformers in this country—to say that, so far as he knew, not one of them was in the habit of taking any preparation of laudanum. (Hear, hear.) He had mingled very much during thirty-two years of his life—since he was a boy—with all classes of temperance reformers. He could say for himself that he had had his share of work during his life, could do without intoxicating liquors, and never used opium. He believed such was also the experience of the great majority of temperance people in this country. (Applause.)

Dr. DE MEY: I have a larger experience than the last speaker.

Dr. RUTHERFORD said he quite admitted that he was a very young member of the profession, but he had simply risen to state his belief that few temperance people used stimulants of any kind.

Dr. SCATCLIFF remarked that he had been in practice for twenty-six years, and had mingled a great deal with temperance people, but had never heard of one of them being addicted to the use of morphia or opium as substitutes for alcoholic drinks. (Hear, hear.)

The vote of thanks proposed by the Sheriff having been seconded, it was carried by acclamation.

Mr. BOWLY having briefly acknowledged the compliment, the proceedings terminated, having lasted two hours; and each medical gentleman was presented, on retiring, with a copy of the first volume of the *Medical Temperance Journal*.



## INTEMPERANCE IN ITS MEDICAL AND SOCIAL ASPECTS.

THE following paper on "Intemperance in its Medical and Social Aspects," was read in the "Public Medicine" section before the mem-

bers of the British Medical Association at Newcastle-on-Tyne, on Thursday, August 11th, by Dr. J. W. Eastwood, of Dinsdale Park, Darlington :—

“ Amongst the subjects of domestic and national interest stands foremost that of intemperance. No political question is so important, and, for the welfare of great masses of the community, no medical question is more important. Of the injurious effects of alcoholics upon the body, it is only necessary to mention diseases of the liver, kidneys, and brain. The most serious results are produced upon the brain and mental faculties. As a poison, alcohol produces death rapidly by causing congestion of the brain, coma, apoplexy, and paralysis of the heart. In one case which came under my notice, death by coma speedily resulted from drinking whisky to excess, and in another case death took place more slowly by exhaustion from diarrhoea, brought on by drinking large quantities of beer. It is not, however, the object of this paper to consider those cases, but to deal with the subject in its relation to insanity, crime, and pauperism. We have various forms produced as the mental and physical effects of insanity. This is a very common cause of insanity. 1. Acute mania of a noisy and destructive kind. 2. Delirium tremens; the two together, with drunkenness, forming what has been called acute alcoholism. 3. Dipsomania, a term properly restricted to mean an irresistible impulse to drink alcoholics. 4. Dementia, with gradual loss of memory and energy, and diminution of muscular force. 5. Chronic alcoholism, in which degeneracy of the individual is a characteristic result of intemperance. 6. General paralysis of the insane. 7. Other forms of insanity; acute and chronic. Some of these terms are ill defined, and have been often misunderstood. In its restricted meaning it would be better to do away with the term chronic alcoholism. Magnus Huss first used the word alcoholism in 1852 at Stockholm, to express the

total effects produced upon the nervous system by alcoholic intoxication, and described an acute and a chronic alcoholism. For some years past the terms have acquired a still more extended meaning, and ought now to include all the accidents produced by the introduction of alcohol into the animal economy. All these forms of bodily disturbance attended with mental symptoms come under the notice of psychological physicians. The State takes cognisance of this, as well as of all other cases of insanity, when a proper order and medical certificates are given for the patient to be detained under care and treatment in a public asylum, a registered hospital for the insane, or in a private licensed house. There is no difficulty in most of these forms of disease in obtaining proper certificates, where it is manifest that medical unsoundness exists with or without delusions. But great difficulty does exist with the form known as dipsomania. For whilst there can be no doubt that in many cases the symptoms are plain, yet in others it is not so easy to describe them so as to bring the patient under the definition of being of unsound mind. And there is in this country no middle course to be pursued, since, so far as treatment is concerned, the patient must be either entirely free or under legal detention. A member of our profession is now endeavouring to remedy this state of things, that the State may step in and take care of or provide for the individual who is unable to take care of himself. Mr. Donald Dalrymple, M.P. for Bath, gave notice last year, that he should move a resolution to the effect that it is desirable to legislate for the proper reception, detention, and management of habitual drunkards. He moved a resolution, and the Government suggested that Mr. Dalrymple should himself bring in a bill for the purpose. He recently introduced a bill into Parliament, which is entitled, ‘A Bill to Amend the Laws of Lunacy, and to provide for the Management of Habitual Drunkards.’ It was prepared and brought in by Mr. Dal-

rymple, Mr. Gordon and Mr. Pease, but, in consequence of other more pressing measures, it has been withdrawn until next session. The first clause defines the habitual drunkard as any person who, by reason of frequent excess or constant use of intoxicating liquors, is incapable of self-control, and of proper attention to and care of his affairs and family, or who is dangerous to himself or others. Such person may, if he likes, upon his own written request, without certificate or any other evidence than his own statement that he is an habitual drunkard, and that he wishes to be taken care of, be admitted into a reformatory, sanitarium, refuge, or other suitable place established for the purpose. He may also be admitted against his will upon the request of a near relative, friend, or guardian, who must get two medical certificates as to his intemperate habits and dangerous propensities. He is not to be admitted for less than three or more than twelve months, and he is only to be discharged during that period by an order of the Lord Chancellor, or by a commissioner of lunacy, or by a justice of the peace, on satisfactory proof being given that he is cured, and may with safety be released. But no such discharge shall be made without consultation with, and certificates from, one or more duly qualified practitioners that he has recovered. Magistrates may commit any person thrice convicted in six months of drunkenness, or breach of the peace whilst drunk, to one of these reformatories, for not less than three, or more than twelve months; but the period of committal may be extended for six months more upon a medical certificate that such extension is required for the restoration of mind and health of the detained party. The Act is to be called 'The Habitual Drunkards Act.' This is the first step towards providing restraint for dipsomaniacs, and the bill is a compound of the voluntary system with legal control. It includes ordinary drunkards in its provisions, as well as those other cases where the unnatural craving for drink is of

the nature of an insane passion. But it does not go too far, and it is the first public recognition of the connection between intemperance, insanity, and crime, in unfitting persons to take care of themselves. Where drunkenness is voluntary it is a crime; and where it is involuntary, or not under a person's power of self-control, it is insanity. This is not the only connection to be observed, for drunken parents have frequently drunk, or criminal, or insane, or idiotic children, and thus the evil goes on from generation to generation, until the family dies out. Separation from home and friends, and a miserable death, is often the end of dipsomaniacs who are allowed to go to ruin of body and mind without any interference from friends or the State. Such liberty of the subject may be very precious to some persons, but it will be very properly restrained by the bill mentioned. It will do good by its effect on public opinion, even more than by the direct benefit to the individual especially concerned.

*"Crime and Drunkenness."*—The amount of serious cases of crime has not increased for some years past, though drunkenness is undoubtedly on the increase. Judges and magistrates have frequently testified how commonly crime is associated with drunkenness. Our large towns are the most conspicuous for the drunken habits of the people. Whatever may be the exact cause of this striking difference, Sir Wilfrid Lawson has admitted in Parliament that there is an increase of drunkenness, and statistics show a decided increase. Some of our large manufacturing towns compare very unfavourably with the cities, even when the population is nearly the same. Liverpool, Manchester, Newcastle, Warrington, Rochdale, and Bolton, are conspicuous for their drunkenness; while Norwich, Exeter, and Oxford, are remarkably temperate.

*"Pauperism."*—In England and Wales pauperism is increasing, even allowing for the increase of population. The bulk of this mass of poverty is admitted to be caused by intemperance.

*“Consumption of Intoxicating Drinks.”*—The population has increased only two millions during the last twenty-eight years. The consumption of British wines, cider, and perry, has remained nearly stationary. The consumption of spirits is slightly decreasing, and foreign wines are increasing considerably, but ale and beer still more so, and form the staple drinks of the people of this country. Ale and alehouses were mentioned in the laws of Ina, King of Wessex, in 728, and drunkenness was forbidden by the common law. Our Saxon ancestors were a drunken people, as well as the Danes. Wherever we find men of the great German and Scandinavian races, whether they be English, Scotch, Dutch, Danes, or Swedes, we find them fond of beer, and noisy in their drink. A more general description of these races than that of fair-haired and light-eyed, is that they are a *beer-loving race*. The more southern nations of Europe are generally wine-drinkers, quieter in drink, and more temperate than the northern nations. The practice of drinking light wines conduces to temperance, and this result is not owing to public agitation and the temperance movement, but to increased knowledge of different kinds of wines, and a change in British taste. It has been at length discovered that the highly brandied wines are more deleterious and more pernicious than the lighter wines which are now more extensively used.

*“The Medical Profession.”*—It is very striking how generally the profession has kept aloof from any of the movements which have for their object the promotion of temperance, and this state of things must be ascribed chiefly to indifference. It is also partly owing to the fact that many extreme opinions have been put forward by the advocates of the temperance movement, and more zeal than discretion has been exhibited in the controversy on the subject. The medical men who were stated, in the “*Temperance Almanac for 1870*,” to be total abstinens, number only 166, and of these many are professed homœo-

pathists and hydropathists. The clergy and ministers of different denominations, on the other hand, have taken up the matter more warmly, and no doubt on moral and religious grounds. Why is there this difference between the two professions? Medical men have not seriously and scientifically examined the question, and they have been prejudiced against it by the many absurd notions held by those who advocate total abstinence. When we find men, as lecturers, going about from town to town, and telling us that those who drink moderately are as bad as those who drink to excess, that it is a sin to drink alcoholics at all, and that the use of wine at the sacrament is sinful, and prove their notions from the Bible, intelligent and reasoning men may well hold themselves aloof from such advocates, who do the cause of temperance much harm. At the same time, medical men have not given the same attention to this great question as they have given to other subjects connected with the health of the people. They have been earnest in caring for the public health in respect to prostitution, to sanitary arrangements, and to the entire suppression of smallpox. Yet they have been comparatively indifferent to the amount of disease and death, crime and misery, produced by intemperance. Some years ago a medical declaration was extensively signed to the effect that a large amount of misery, poverty, crime, and disease; was produced by alcoholic liquors, that persons could enjoy good health without them, and that total abstinence from them would greatly contribute to the well-being of mankind. In the abstract this seemed to be all true, but very few medical men who signed the document put the statement into practice; and its influence upon the public has been very small. Of course, if total abstinence were universal, there would be no drunkenness. But it is a perfectly utopian idea, and the advocates of the system have not thereby lessened the list of disease, drunkenness, or pauperism. The drinking of alcoholics has always

existed, and in every country, and we must change the nature of man, his habits and ideas, before we can expect universal abstinence to be produced. This consideration does not exonerate us from doing our utmost to lessen the mighty evils that result from the drunkenness of this country. In an able leading article in the *British Medical Journal* for June 4th, 1870, the impassive attitude of the medical profession is fully acknowledged, and yet the writer appears to think that medical men have come to the conclusion that water-drinking is not the best thing for mankind in general, or our portion of it, even in ordinary health. Certainly, great masses of our profession act up to this view. But it is not a conclusion come to with calm deliberation, after serious examination of the facts. It has long been the habit of medical men to recommend alcoholics simply because their patients wish to know *what* they are to take, expecting, as a matter of course, that they must take something. Is it right thus to humour people, and thoughtlessly add to the amount of misery and disease produced by these causes? Persons come under my care who have been advised by their medical attendants to take perhaps three or four glasses of wine daily, without any apparent object to be gained by such treatment.

“*Remedies.*—It may be safely concluded that total abstinence, or the temperance movement, has failed materially to arrest the progress of drunkenness in this island. It has no doubt done some good in diffusing information. But it has not created a sound public opinion. Its doctrines are too narrow, and they can never be carried out fully. The improvement which has taken place in the habits of the upper and middle classes during the last twenty years is due more to education than to the principles of total abstinence societies. Mr. Dalrymple’s efforts are only in one direction, the cure of those who are technically dipsomaniacs and drunkards; but if successful, they will result in the widespread belief that drunkenness is allied to crime on

the one hand, and insanity on the other. When once the public mind is imbued with this idea, we may hope for a large decrease of intemperance. Another legislative effort has recently failed. The Permissive Prohibitory Liquor Bill was moved by Sir Wilfrid Lawson, the zealous advocate of temperance, and seconded by Lord Claud Hamilton, in the House of Commons, on July 13, 1870. Sir Wilfrid quoted from chaplains of gaols in various parts of the kingdom to say that education was not a specific calculated materially to check drunkenness and crime, and had recourse to statistics to show that intemperance was on the increase in the large towns of this country. He said he had little hope of permanently checking drunkenness unless some decided step was taken by the Legislature. He thought the licensing system ought to be altered; and though the Home Secretary could not agree with him as to the bill, yet he thought something might be done to restrict and control the licences given. In a speech which Mr. Bass made on this subject, he said the capital involved in the manufacture and sale of alcoholics amounted to £100,000,000 and a revenue of £23,000,000. The principle of giving two-thirds of the inhabitants of any district control over the licensing system was decidedly rejected.

“*What, then, can be done by the Medical Profession?*—1. Mr. Dalrymple’s bill ought to be supported, so that dipsomaniacs and confirmed drunkards may be placed under care and treatment with State provision as persons of unsound mind. 2. Legislation respecting the licensing system should be encouraged, and especially as regards beerhouses. 3. The subject of intemperance should be fully examined in a scientific and humanitarian spirit, and the public should be taught, on medical authority, what is the true position of alcoholics in relation to health and disease. To carry out these or any other more desirable plans, it would be most useful to appoint a committee of inquiry to examine the whole subject of intem-

perance, and to make a report to the British Medical Association, or in the pages of its journal, respecting the best measures to be adopted; and some decided total abstainers should be members of the committee, in order that their own views and experience might have due weight. With scarcely more than the notable exception already mentioned, the medical profession is doing little to stem the torrent of drunkenness, crime, pauperism, and insanity, which fills our prisons, poorhouses, and asylums. We have now a great duty to perform, which is not merely to follow in the wake of others, but to be the leaders in a general movement for the regeneration of our country from its greatest curse."

Dr. J. C. REID, of Newbiggen-by-the-Sea, Northumberland, thought the thanks of the section were due to Dr. Eastwood for calling attention to the intemperance which reigned, especially amongst the working classes. For more than thirty years he had been of opinion that there was no cure for the insatiable drunkard, no matter whether he belonged to the class of constant tipplers or periodical drinkers, save restraint by confinement. There was a marked distinction between the two classes he had referred to. One of the classes of drunkards abstained for six months at a time, and then drank for six weeks. There was no cure but restraint. He would go further, and say that not only should drunkards be confined on their own affidavits, but on the complaint of their wives and families as well. There was no doubt whatever that there was a vast amount of pauperism due to intemperance. The habit was not confined alone to the working classes. Even the higher classes were much addicted to intemperance. He had had a gentleman applying to him to know where to place an intemperate friend under restraint for a limited length of time. He saw little distinction between an intemperate labourer and a thief. The man who neglected his duty as a husband and father for the sake of drink, robbed his own family and was worse than a highway

robber. He considered, however, that it was very unfair to the poor subjects of dipsomania that there was no asylum or place of refuge where the passion for drink might be allowed to die out. He knew medical men suffered a good deal pecuniarily through the drinking habits of their patients. He had known instances of persons who owed bills for two or three years' medical attendance, who spent more during a single week's debauch than would have paid the doctor. If other medical men had suffered as much in that way as he had, he was sure they would be a little more active in trying to discover a means by which the drunkenness of the country might be swept away.

Dr. C. B. TAYLOR, of Nottingham, was not in favour of compulsory institutions. He disapproved of the bill.

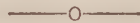
Dr. A. P. STEWART, of London, did not doubt the country stood much in need of some measure, if such a measure could be devised, which, without unduly infringing personal liberty, could make it possible to reclaim habitual drunkards. Such a measure would tend greatly to diminish the sufferings of the wives and children of drinking working men, and help to relieve the community of an enormous burthen. The greater part of the pauperism of the country was dependent upon drink. It was perfectly true that the drinking habits of the better classes had greatly diminished during the last twenty years. He could recollect that it was a common thing some years ago that at a dinner party of twenty or twenty-four persons, four or five would go up to the drawing-room in a shameful state, and make considerable fools of themselves before the ladies. Such conduct had almost disappeared from among the better classes; but as yet those improved habits had not descended to the lower orders of society. One reason was that there were enormous facilities for obtaining drink, and it was coming to be generally admitted on all sides that the more numerous public-houses were, the greater the amount of drunkenness and misery.

He had long seen that there was a great political difficulty in the way of restraining drunkenness, and this bill did not get over it. He believed that in the vast majority of cases there was nothing like real insanity in the individual originally, but that he became so through long indulgence, which tended to affect the mind. But there were a certain number of cases in which it might be found that drinking not only induced mania, but hereditary mania. He had known such cases, and found many of them among the upper classes; though, as a general rule, the spectacle was not often witnessed of ladies and gentlemen appearing in public the worse for drink, yet, in private, the habit was very common indeed. He had himself known many melancholy cases of the kind. Under what circumstances they should permit interference with personal liberty he was not prepared to say, but he looked with great interest to the attempts which were being made to the elucidation of this most difficult subject.

The CHAIRMAN (Dr. Morgan) said he had seen a good deal of the state of the poor in the slums of Manchester. District nurses were employed to visit such places, and their uniform testimony was, that the poorest of the poor managed to get money to drink. But heavy drinking was not confined to the lower classes. The upper and middle classes indulged very freely in

the vice, and he had been told that many ladies high up in the social scale not only tipped to a considerable extent, but frequently suffered from delirium tremens. He had been sometimes astonished to hear some of his female patients declare that they were constantly in the habit of taking a glass of brandy-and-water before going to bed. It seemed apparent that the best means of improving the habits of the people was to have as few public-houses as possible. The island of Lewis on the coast of Scotland, with a population of 20,000 persons, was an instance of the beneficial results of keeping down the number of public-houses. In the town of Stornoway, in that island, there were only two public-houses, and the people enjoyed extremely robust health, mainly through the absence of drink.

Dr. EASTWOOD said it was admitted that the sale of intoxicating liquors was increasing. For his own part, he could say that the applications made to him to receive patients suffering from the effects of drinking, were invariably from the upper classes, and educated people. He trusted that a committee of the British Medical Association would be appointed to consider this subject of drinking and drunkenness, and to watch over any bill bearing on the matter which might be submitted to Parliament next session.



## LEGISLATION FOR HABITUAL DRUNKARDS.

THE following is a copy of a Bill to amend the Law of Lunacy, and to provide for the management of Habitual Drunkards, introduced to the House of Commons (and afterwards withdrawn for the session) by Dr. Donald Dalrymple, M.P. :—

Whereas it is expedient to extend the provision of certain laws for the protection of the persons and properties of those who, by reason of frequent, excessive, or constant drunken-

ness, shall be incapable of or unfit for the proper management of their families, persons, or property :

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :

### PART I.

1. That any person who, by reason

of frequent, excessive, or constant use of intoxicating drinks, is incapable of self-control, and of proper attention to, and care of, his affairs and family, or who is dangerous to himself or others, shall be deemed an habitual drunkard and of unsound mind.

2. An habitual drunkard may be confined in any licensed reformatory, asylum, or refuge, or in any reformatory, ward, or building attached to or belonging to any union or parish work-house while under the influence of such unsoundness of mind, and for a sufficient length of time afterwards as may be necessary for the due protection and more complete restoration of the mind and health of such person.

3. Reformatories, sanitariums, or refuges for the reception of such persons as are described in section one of this Act may be established by private individuals, or by an association of individuals, or by corporations or unions, or by the magistrates assembled in quarter sessions, and nothing in this Act shall be construed as preventing the proprietors or keepers of lunatic asylums to keep such reformatories, sanitariums, or refuges, provided always that they are not situated under the same roof or within the compass of the walls of the same buildings in which lunatics are confined.

4. Such reformatories, sanitariums, or refuges shall be subject to all the provisions of the Act eighth and ninth Victoria, chapter one hundred, so far as relates to licensed houses and visitations by Commissioners in Lunacy.

5. Any person affected as described in the first section of this Act may be admitted into any such reformatory, sanitarium, or refuge, upon their own written request, without certificate or other evidence than their own statement that they are habitual drunkards and that they desire to be taken care of in such reformatory, sanitarium, or refuge.

6. Upon the request of a near relation, friend, or guardian, persons affected as described in the first section of this Act may be admitted upon the production of certificates, signed

by two duly qualified medical practitioners, and upon the affidavit or declaration of some credible witness other than applicant, stating that the party to be admitted is a confirmed or habitual drunkard, and either incapable or dangerous as before described.

7. Such certificates shall be given only after a separate examination of the person to be admitted by each signer of the said certificate, and that such certificate shall fully and completely state the facts upon which such certificate is made; the facts to be classed as those personally known to the signer and those related to him by others.

8. Keepers of reformatories, sanitariums, or refuges duly licensed shall, within forty-eight hours after the admission of any person, send a copy of the request for admission, and of the certificates and declarations upon which such admissions shall have been granted, to the Commissioners in Lunacy.

9. Any person confined in any reformatory, sanitarium, or refuge duly licensed under this Act, may be discharged by an order of the Lord Chancellor, or by a Commissioner of Lunacy, or by a justice of the peace, on satisfactory proof being given that such person is cured of his or her disorder, and that he or she may, with safety to himself or herself and others, be discharged; but no such discharge shall be made without consultation with and certificates from one or more duly qualified practitioners that such person is recovered.

10. All proceedings and matters relating to and affecting the guardianship and management of the person affected as hereinbefore mentioned (section two), or of his or her estate, shall be in accordance with and governed by an Act entitled "The Lunacy Regulation Act, 1863."

11. No person who shall be admitted to a reformatory, sanitarium, or refuge, either on his or her own application, or on the application of relation, friend, tutor, or guardian, shall be admitted for less than *three months* nor more than *twelve months*; but

nevertheless it shall be lawful for any Commissioner in Lunacy, or justice of the peace or magistrate, or, in case of the person being sent by order of the Lord Chancellor, then for the Lord Chancellor, to shorten or to extend the period of residence upon the certificates of two duly qualified medical practitioners that it is desirable and safe to do so.

#### PART II.

12. It shall be lawful for the magistrates of any county, city, or borough to establish a reformatory, sanitarium, or refuge, and to make suitable provision for the reception and detention of any persons affected as described in section two of this Act, or to convert any ward, wing, part, or whole of any existing prison, jail, or house of correction, to such purposes; or to contract with proprietors of any duly licensed reformatory, sanitarium, or refuge for the reception of persons as afore described, and the cost thereof shall be defrayed out of any county or borough rate, as is now done in regard to any prison, jail, or house of correction.

13. It shall be lawful for any board of guardians to appropriate a ward, wing, or building belonging to the union or hundred workhouse to the purpose of a reformatory, sanitarium, or refuge for habitual drunkards.

14. It shall be lawful for any justice of the peace or magistrate sitting in petty session to send to a reformatory, sanitarium, or refuge, any person who on it being proved by evidence

given before him and by the certificate of two medical practitioners that such an one is a person as described in section 1, Part I. of this Act, and who is unable to pay for his or her maintenance in any other reformatory, sanitarium, or refuge, for a period not exceeding *twelve months* nor less than *three months*.

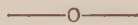
15. It shall be lawful for any justice of the peace or magistrate sitting in petty session to commit to such reformatory, sanitarium, or refuge, without certificate, any person who has been convicted of drunkenness or a breach of the peace while drunk three times within six calendar months, for a period not less than *three months* nor more than *twelve months*.

16. The period of committal may be extended to a period of not more than *six months* beyond the time of the first committal, upon the evidence or certificate of a duly qualified medical practitioner that such extension of the period of detention is required for the restoration of the mind and health of the detained party.

17. Nothing in this Act contained shall be construed to alter the law so far as regards the liability of drunkards for criminal acts done by them while under the influence of drink.

18. In so far as they may be applicable, the provisions of the Lunacy Regulations Act shall be incorporated in this Act.

19. This Act shall be called the Habitual Drunkards Act, 1870.



#### LETTER FROM BAKER BROWN, ESQ., F.R.C.S., &c.

(To the Editor of the *Medical Temperance Journal*.)

SIR,—I have read with much interest, in your last July number, an article by Dr. Edmunds, "On Alcoholic Drinks as an Article of Diet for Nursing Mothers," as of late years I have gradually become convinced that milk diet is well fitted for severe surgical operations, although in all my works I have recommended the

free use of wines in the after treatment, especially in cases known in surgery as Plastic operations. I have lately had a striking case of this kind, in a lady upon whom seven years ago I performed an operation for ruptured perineum. She has lately come under my care for a second time, having been again ruptured in her last confine-

ment. This time I treated her entirely without alcoholics, and her recovery has been so quick and so entirely satisfactory, that I shall for the future follow the milk diet system, and, as a general rule, treat my surgical cases altogether without alcoholics. I am glad to confirm the views of Dr. Edmunds from my own experience, as I regard this question

of the recommendation of alcoholics by medical men as one of great importance.

I am, Sir,

Your obedient servant,

I. BAKER BROWN,

(F.R.C.S. Exam.)

2, Osnaburgh Place, Regent's Park,

Sept. 12, 1870.



## Notes and Extracts.



MR. SAMUEL BOOTH, M.R.C.S., Huddersfield, writes:—"I have been a teetotaler about thirty years, and can bear my humble testimony that the principles of total abstinence from *all* intoxicating drinks have never been injurious but *healthful* to me, engaged as I have been for nearly forty years in the very extensive general practice of my profession. I am stronger and healthier at sixty years of age than I was at thirty, and can bear more work mentally and physically as a teetotaler, than when in my younger days I used to take beer, porter and wine."

A BOTTLE OF BORDEAUX DAILY.—Dr. C. R. Drysdale, in a letter to the *Medical Press and Circular*, says:—"I think it an immense pity that able and energetic men like Dr. Anstie and others should be on the side of the alcoholists, because the giving up of smoking and drinking, a difficult matter at any time to uncultivated persons, is rendered almost impossible so long as we have such clever journals as the *Practitioner* recommending a person in health to take a bottle of Bordeaux wine daily. For my part, I see too many diseases caused by alcohol annually not to be persuaded that it is one of the most dangerous articles of diet; and I also may remark that I have seen too many instances of longevity and

perfect health in persons who abstain from it not to feel sure that a bottle of Bordeaux wine daily is anything but a necessary of existence."

TEST FOR AMYLIC ALCOHOL.—Since the internal use of amylic alcohol, even in small quantities, is very deleterious, the means of rapidly testing for its presence in spirits and alcohol (either for pharmaceutical or scientific use) is of importance. The suspected alcohol is poured into a burette, mixed with its own bulk of pure rectified ether, and also its own bulk of water, and the mixture gently shaken; the ether on becoming separated from the rest of the fluid floats to the top, containing in solution the whole of the amylic alcohol which might have been contained in the alcohol or spirits under examination. The ether is removed by a pipette, and, on leaving it to spontaneous evaporation, will leave behind the amylic alcohol readily detected by its offensive odour.—*Quarterly Journal of Science*, July, 1870.

ARTIFICIAL STIMULANTS stand high in vulgar and ignorant estimation, but their employment is apt at length to impede and depress natural power, and therefore to diminish that sense of enjoyment in effort which is the best evidence of healthy condition. The depression which succeeds stimu-

lation is the cause of the dangerous habit of resorting to stimulants for the renewal of that false sense of power, which arises from their immediate action. When enjoyment is not to be secured without some alcoholic aid, the nerve system is already perverted from its right condition, and the individual thus afflicted should at once deny himself such indulgence, or prepare for the risk he runs of becoming that most deplorable and pernicious being, a muddle-brained man, whose end is habitual drunkenness with delirium, for which suicide or the madhouse is, alas! the too frequent termination.—*The Power of the Soul over the Body*, by George Moore, M.D., &c. &c. Sixth edit. p. 139.

INTEMPERANCE AND INSANITY.—Dr. Tyler, of the American McLean Asylum for the Insane, in referring to the alarming consequences of the greatly increasing indulgences in excessive drinking of wines and ardent spirits says:—"More persons, chiefly young men, either positively insane, or who have been seriously damaged mentally and physically by this cause, have come under my professional observation, or have applied for advice and relief during the last year, than I can remember before in the same length of time. Excessive and continued drinking of wine leads to a peculiar disease of the brain not always manifest by any violent demonstrations of conduct, and it is, therefore, very apt to be disregarded until entirely beyond cure. The same excess may bring the brain into a state in which any shock, whether of disappointment or chagrin, or loss of friends or property, will develop an utterly hopeless form of mental disease, but which would have been borne without breaking by a healthy organ."

ADVICE TO STUDENTS.—In most of our hospitals the hour of visit is in the afternoon, the morning being given up to class-work, dissection, and what not. Between the two there is, ordinarily, a space devoted to refreshment, which some men

occupy in dining. We cannot commend the practice, for after a heavy meal the brain acts more sluggishly, especially if more than a very small quantity of beer has been consumed; and whilst at his work the student should be as sharp as a needle. It is, therefore, better to take only some light refreshment at midday, and to partake of the heavy meal of the day only when hospital work has ended. A story goes of a distinguished judge who used invariably to have beer at lunch time, his brethren on the bench indulging in wine or coffee. They used to tease him about the practice until, one day, he turned the tables on them by telling them he drank the beer to bring down his intellect to the level of the other judges. But medical students, as a rule, cannot afford thus to handicap themselves, and they will do well to bear the judge's remark in mind, for the sake of avoiding what notoriously blunts the intellectual faculties. Those who do not dine at home will best do so on their way from the hospital, after which a chat with a friend, or a look at a newspaper, a cup of tea or coffee to brighten the intellect, and, like a giant refreshed, the student is ready for work again.—*Medical Times and Gazette*, Sept. 10.

A NEW STIMULANT.—It cannot be too widely known that persons who object (whether for good or bad reasons) to take or to administer alcohol in cases of prostration, or in those numerous morbid conditions of the nervous system which are akin to the exhaustion of fatigue or innutrition, may avail themselves of an admirable substitute of a perfectly safe character, against which neither the conscience nor the palate will rebel. The substitute is nothing less than Liebig's extract of meat, an article well-known, and in general use in respectable households, and frequently used in the preparation of beef tea, and for gravies, &c. As ordinarily used, the extract is certainly not to be regarded as a stimulant, except in so far as all nourishments are stimulating; but when made into

tea of very great strength it is another matter. A teaspoonful mixed in a teacupful of hot water (the water need not be boiling hot), with a sufficiency of salt to render it palatable, acts as an immediate stimulant, being quickly assimilated, and affording an impetus to the circulation while actually nourishing the tissues. The drink thus prepared is of a fine dark brown colour, very nearly approximating to the colour of coffee, and is extremely palatable. In its effect it differs from alcohol; it does not provoke the tongue to action, or disturb the healthy action of the brain, but it gives warmth to the whole frame, tone to the nervous system, and a steadiness to the operation of the senses. It is, in fact, one of the most valuable of restoratives, and especially useful, as above remarked, to those who need the aid of alcohol, but have an objection to take it, or to whom, perhaps, it may be repugnant. It is proper to remark that a constant use of strong infusions of the extract by healthy people is not to be advised; it, in fact, might prove injurious, just as the excessive use of alcohol must prove. In common with all other stimulants, it must be used with caution, but many cases occur in which it would prove a real blessing, and a safe substitute for brandy, wine, &c.,—*Dr. McDonnell, in the Gardener's Magazine.*

**TREATMENT OF DELIRIUM TREMENS.**—In the Psychology Section of the British Medical Association, Professor Laycock (the President) introduced the question of "How far Alcoholic Stimulants are necessary for the treatment of ordinary cases of Delirium Tremens." He said he would just, if possible, state in a few words what really was meant by the words delirium tremens, as he found they differed very much as to the idea of what was included under the term, and that made the term so very vague that it led to misapprehension as to the results and treatment. When a man had been drinking for a number of days or weeks, there were various points to be considered. First of all,

there was the fact, how did he come to drink so as to get something like delirium tremens? Some men had been drinking for a series of years—drinking every day—and they were in a sense imbued with alcoholic stimulants. They were what is called "sots" or "soakers." Another class was very common, and it is that of a man not habitually a drunkard, not a sot; on the contrary, he may have been a total abstainer, but from some cause or other the desire of stimulants arose, and he begins to gratify that desire. That class of case must be carefully discriminated from that of the habitual drunkard. The others may be termed the dietetic class of cases. He had seen regular teetotalers overcome by an irresistible desire for drink. There was another class of cases which might be allied with them; they were the individuals who had had some injury to the head, some affection of the nervous system—sometimes a sunstroke, sometimes a blow on the head. These persons were apt to become drunkards. They knew that drunkards would go on sopping for months and years without delirium tremens; so much so was that the case that some persons had said that drinking did not lead to delirium tremens. Nor did it in that sense. The drunkenness was generally a predisposing cause. He thought, according to his experience, that the most common and exciting cause was some pulmonary affection. He had also observed delirium tremens come on persons through cold. In the case of "soakers," who drank for months, the exciting power to delirium tremens was some ordinary disease. Continuing his remarks, Professor Laycock pointed out very clearly the difference between what is known as "the horrors" and delirium tremens, and showed that there were differences in the symptoms according to the different kinds of drink taken. He pointed out the qualities and effects of "bitters," the symptoms of "the horrors" and delirium tremens, and combated some of the conclusions of Dr. Cummings, of Belfast, as to the giving of alcoholic stimulants to patients by

way of "tapering them off." Dr. Cummings said he had listened with very great interest to the most important points of the learned professor's address on delirium tremens, but that the professor had unintentionally misrepresented him. In the first place, he could unhesitatingly corroborate the statement that a very large number of persons said to be suffering from delirium tremens were under the influence of "the horrors." As to the treatment of delirium tremens, he did not, as a rule, give alcoholic stimulants to persons suffering from the disease, except sometimes in consequence of the circulation, and sometimes in consequence of the coldness of the extremities.

WOUNDS AND SPIRITUOUS LIQUORS.—As the best mode of treating gunshot wounds is now a subject of discussion, it is interesting to recall the observations made in a letter to Dr. Simmons by Robert Jackson, M.D., physician at Stockton, in the county of Durham, extracted from vol. xi. of the *London Medical Journal*, and quoted in the *Annual Register* of 1798. Dr. Jackson says:—"In the year 1779 a party of the loyal American militia, who had attacked a post of the enemy in the back parts of the province of Georgia, were obliged to retire without effecting their purpose. A considerable number of them were wounded, and as their distance from the army precluded them from surgical assistance, their wounds were only bound over with a bit of rag. Such was the fact. The consequence was not what might have been expected, for among the number of wounds which I afterwards saw, there were several which we should have expected to be troublesome and tedious in cure, if treated according to the common rules of surgery, but in reality they healed speedily and well. Another action was fought some time after at Brier Creek. The greater number of the wounded were conveyed to the hospital, and furnished with proper accommodations and surgical assistance; but there were also some of the militia who remained in the woods,

and paid no other attention to their wounds than simply to bind them up. The contrast in point of treatment was obvious in the present case, and the difference in effect was not less remarkable; for in as far as I could judge from those examples which I had an opportunity of comparing, the progress towards healing was not less advanced in three weeks, where there was not anything done, than in five, where art and skill were employed." Dr. Jackson further states that after the action at Cowpen, in South Carolina, in January, 1781, which took place near the mountains in a district of the country almost uninhabited, 120 men lay wounded on the field or dispersed themselves in the neighbourhood, where they accidentally found the shelter of a hut. It was not in his power to visit them all, and consequently nearly a fifth of the number were not attended to immediately. He remained in the district nearly six weeks, during which time he had an opportunity of observing that those wounds to which little or nothing had been done generally healed more rapidly, and were seldom attended with so much pain and inflammation as others subjected to surgical treatment. Rest and quiet, he adds, are uniformly supposed to be proper in the treatment of wounds. Where wounds penetrate into the cavities of the body, motion would often be dangerous; and where legs and thighs are broken, it cannot be attempted unless with great caution; but in the ordinary circumstances of flesh wounds, the advantages of moving about, even of travelling or continuing to march, are great and obvious. After the action of Guilford, in North Carolina, every man who was capable of being conveyed, either in litter, waggon, or on horseback, was carried with the army. The healing process was rapid while on the march, it proceeded more slowly when the army halted for a few days at Cross Creek, became retrograde when the troops fixed their station at Wilmington and the soldiers had an opportunity of access to spirituous liquors.—*Pall Mall Gazette*.

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ALCOHOLIC DISEASES.

IN taking up our pen to treat upon a subject of such vast extent, we are almost dismayed at the magnitude of the task which we have undertaken. Alcoholic diseases! Where shall we begin, and where shall we end? To do anything like justice to our title we should both weary our readers and considerably overtask our own powers of literary endurance. Alcoholic diseases are legion; we are lost in the field of inquiry; for, independently of the numerous host of *special* and *defined* diseases which are the openly and universally acknowledged result of alcohol drinking, there are countless forms of anomalous disorders of the general health which originate in this baneful practice, but which nevertheless exist, although they are more or less unrecognised by pathological writers. Unfortunately it has hitherto been no one's *special business* to bring to the light of day the action of alcohol upon the human body, viewed especially as both a *predisposing* and an exciting cause of disease. And we here throw out the hint to any enterprising writer that there is here a gap in medical literature which has been strangely overlooked. A volume might be written upon the various compounds of alcohol viewed as *predisposing* causes of disease, which would be a boon to society in the present generation, and place its author amongst the greatest benefactors of his kind. Long observation and many years of practice convince us fully that thousands die every year in this land of ours, and that their deaths in our registration books are ascribed to *special* diseases, whose presence would have been unknown had not the

way been prepared for them by alcohol drinking, which first laid their foundation by lowering the animal tone, and weakening and undermining the conservative powers of life. It is a great mistake that these primary causes of disease are unrecognised in our registration returns. For under a proper system of recognition they might be utilised for the warning and guidance of the weak brothers in our own generation, but it is to be hoped that we shall some day become wiser, and make use of facts which are now being hopelessly lost. Observation teaches us that we cannot walk down a street without meeting people who are pursuing their daily avocations in life with *apparent* comfort, as yet the subjects of no special diseases, who, nevertheless, are far from a normal state of health. Men, and women too, if the truth were known, or we had eyes keen enough to penetrate into the vital mysteries of their animal laboratories, would be found to be suffering from that lowered tone, general blood poisoning, impaired nutrition and malaise, which are the result of alcohol imbibition and poisoning, and which may be laconically described as chronic alcoholism. Such persons and disease have a mutual attraction for each other. The germ of disease, like the grain of seed, seeks a suitable soil in which to germinate, and assuredly, by the unalterable laws of life, the two are soon in indissoluble union. The body in a state of *perfect* health very seldom receives a germ of disease, or if it should, can easily, by its own conservative power, shake it off, and it is in this way that our lives are often preserved. One thing is absolutely certain to our minds, and that is, that the present amount of disease and premature deaths amongst us are a disgrace to our present enlightened knowledge of etiology and hygiene, discreditable to us alike as a scientific nation and as rulers professing to take care of the welfare of the masses of our countrymen. How much of this misery and predisposition to disease may be the result of alcohol drinking opens up a wide field of inquiry; but that a very large proportion of it is attributable to this cause we unhesitatingly assert. And we protest especially against the plan in the registration of our deaths of ascribing solely to *special* diseases deaths which have been caused, in a greater or less degree, by the predisposing cause of alcohol. Many of these diseases to which death is only partially attributable have no mention of the predisposing cause without which they would never have existed. Is such a system fair or truthful? Why not be honest, and tell the truth? Or why should there be this anxiety to hide the misdeeds of a national enemy? If only a tithe of the truth were known regarding alcohol as both a *predisposing* and *exciting* cause of disease, the world would be dismayed.

Amongst the primary class of *special* diseases induced by alcohol drinking, we begin with the stomach, and it is upon this organ that many of the effects of the habits of the toper are manifest. The stomach has been described as the “storehouse and kitchen of the whole body”—the organ purposely designed by nature to prepare that food which is to make healthy blood to renew our lives from day to day; this stomach is, as it were, at the root of all the nutritive processes of the body, and upon the integrity of this organ our health and strength daily depend; our strength is built upon the foundation of true nutrition, not of stimulation. We shall not here enter fully into the physiology of digestion, but must take for granted the possession of at least a knowledge of the elements of physiology amongst the least educated of our readers. Unnatural irritation and irregular action are the result of the influence of alcohol upon any part of an organised body, and more especially so of contact with an internal tender and vascular part like the mucous membrane of the stomach, and it is upon this particular membrane that alcohol comes into contact and produces many of those changes which result in the dyspepsia, anorexia and vomiting of the drunkard. By the prolonged and continual contact of alcohol with the stomach, particularly when empty, unnatural irritation and irregular action pass on into congestion, inflammation, and ulceration. Vomiting is an openly acknowledged result of alcohol drinking, and is often amongst the most manifest signs of tipping. Ask any medical man, and he will not only readily admit that vomiting is a result of alcohol drinking, but he will go further and declare that it is a complaint of constant occurrence, particularly amongst the poor of our large towns. It is caused by the unnatural irritation and irregular action of alcohol upon the mucous membrane of the stomach, particularly when alcohol is taken upon an empty stomach, and when it consequently gets into close contact with its lining membrane when it is unsheathed by food. The lining membrane of the stomach is highly vascular and studded with gastric follicles and glands. Gastric juice is secreted upon its surface, and this juice is necessary for the solution of various kinds of food. This gastric juice is decomposed and rendered inert by contact with alcohol; hence the various forms of *dyspepsia* and *anorexia* which abound in drunkards. In our professional duties we come into daily contact with numbers of them, and we universally find that the natural and healthy craving for food is more or less destroyed. How science often harmonises with practice! We believe it was Dr. Bowman who said, some years ago, that “it was impossible for digestion to go on with the presence of ardent spirits in the stomach.” With the natural

appetite destroyed, its lining membrane in a state of unnatural irritation, or congestion, or incipient inflammation, its gastric juice decomposed by the contact of the toper's daily draught, how can the stomach perform the function assigned to it of preparing healthy food? It can no longer do so, and the whole system suffers by the suicidal blow struck at the root of all the nutritive processes and sources of strength. The unfortunate toper has only to carry out his murderous policy, and he becomes reduced to that unfortunate condition described in the old song of Three hundred years ago in England :—

“ I can eat but little meat,  
My stomach is not good ;  
But sure I think that I can drink  
With him who wears a hood.”

It is a physiological law that unnatural excitement and irritation of an organ are followed by want of tone, and this fact, we believe, well explains the connection following upon the debauch of the drunkard.

If we follow the investigation further, we find the lining membrane of the stomach *softened* and ulcerated so that it may peel off with the fingers, and the ulterior effects of such a condition are well known to pathologists. No longer can the deluded victim of strong drink digest the simplest form of aliment, and should he not immediately die of inanition, he has only to slightly prolong the process, and die, in common parlance, “ by inches,” simply because he can no longer “renew his life” in the way intended by nature, by digestion and nutrition.

The blood also suffers in a marked degree from the various forms of chronic alcoholism. Physiologically, it deteriorates in quality, and becomes charged with effete material. It is no longer the living pure stream, charged with the elements of the nutrition of every tissue, but is, in addition to being loaded with a noxious matter, full of the irritating poison, alcohol. The worn-out particles, which result from the death of the tissues, are retained, and the oxygenation of the blood is arrested. As many of our beautiful rivers are *perverted* into sewers, so the living stream of life becomes a vital sewer, and the irritating action of alcohol, with its noxious accompaniments, is carried to the remotest parts of the body, with effects which have never yet been fully described. There is a general perversion of the processes of nutrition, and after a time organic disease sets up in those organs which are called upon to eliminate that alcohol. Years ago Professor Schultz, of Berlin, demonstrated the effect of alcohol in shrivelling up the blood globules and destroying their vitality. The presence of alcohol, either in the blood or in

any of the tissues of the body, is *no more necessary* in any normal condition of the system, than is the presence of the ink with which we write.

*Fatty degeneration* of many of the vital organs of the body is a frequent consequence of alcohol drinking, nor can we wonder at it when we view its effect upon the blood, favouring as it does the accumulation of fatty and effete particles, and interfering with those oxidising processes which should burn off from the body all these waste materials. *Ætheromatous* and fatty degenerations ensue in the body of the drunkard where they would never have existed in a normal state, or they are brought about many years prematurely, to culminate one day in apoplexy, or in fatty degeneration of the heart. This is the true history and explanation of thousands of cases met with every week in every town and village of this land, where death is ascribed *solely* to apoplexy or fatty degeneration of the heart, without a breath of suspicion against the primary and predisposing cause—the use of alcohol.

Passing from the stomach to the organs in immediate contact with it, we come to the liver, the largest gland in the body, and this organ is a very common playground for the fatal freaks of alcohol in the human organism. In immediate contact with the stomach by the gastric radicles of the portal vein, and engaged too with the stomach in the process of digestion, the liver cannot help being involved with the stomach in the injuries that it receives from the use of alcohol. These organs are in intimate connection, and hold important relations with each other. To the anatomist and physiologist the liver, with its elaborate structure and ramifications of blood-vessels, nerves, and absorbents, is an organ of immense interest. Functionally considered, its office may be roughly stated to be the secretion of the bile, which is the great outlet for hydrogen and carbonaceous matter from the system; and this fluid, after secretion, plays an important part in the secondary digestion. Many substances, particularly fluids, make their way directly from the stomach to the liver by the radicles of the portal vein, and upon this law we look after death for traces of arsenic poisoning in the liver after it has been taken into the stomach. In chronic alcohol poisoning too the traces are generally found in the liver, and in many so evident that they may be felt by the finger without the aid of sight. Alcohol, after injuring the internal coat of the stomach by contact in the way previously described, gets into the minute branches of the portal vein ramifying in the stomach, and comes into direct contact with the liver, where these veins pass, and oozing through their coats into the substance of the gland, the alcohol comes into contact with a delicate membrane, called *Glissons capsule*, which

invests these vessels as they pass into the gland. Here the same series of phenomena ensue which we pointed out in the case of the stomach. By simple contact of alcohol with this Glissons capsule we get these processes:—1. Unnatural irritation; 2. Excitement; 3. Congestion; 4. Inflammation; 5. Effusion of adhesive lymph; 6. Organisation of lymph; 7. Puckering. These processes are well known to pathologists and physiologists. By the prolonged contact of alcohol all these processes are gone through, and we get the disease called

*Cirrhosis or hob-nailed liver*, the organic disease which is so often met with in the post-mortem examinations of drunkards, and specimens of which are so often found in our pathological museums, metropolitan and provincial. From its natural condition of a large and healthy gland, with a beautifully smooth surface, the liver in this disease becomes shrivelled and atrophied. From long-continued inflammation, induced by the irritating action of alcohol, the areolar tissue between the lobules of the liver has become contracted by the effusion and organisation of the coagulable lymph. The external surface, from its original and healthy condition of being as smooth as glass, has become drawn into knots, and it presents the appearance of the sole of a pair of *hob-nailed boots*! Compare a healthy liver with one of the specimens of cirrhosis at any pathological museum, and the difference will be at once apparent. And this morbid condition, when once brought about, admits of no cure. The case, so far as medicine and treatment are concerned, is irremediable, and is almost invariably the precursor of a series of changes which result in death. Not all the skill of Europe in the present day will avail to eradicate cirrhosis when once established. If the victim lasts long enough this disease generally gives rise to

*Ascites, or Abdominal Dropsy*, a form of dropsy frequently met with during the course of the former malady. It is easily recognised by the practised eye, and indeed can scarcely be mistaken by any one with a moderate degree of skill. It arises from the long-continued inflammation and obstruction to the circulation in the liver induced by the former disease. The abdominal radicles of the portal vein, no longer able to pass their blood through the liver, relieve themselves by effusion into the peritoneal cavity, and ascites is the result. It is in these cases that we so often hear of persons being tapped and losing enormous quantities of water. Cases of this kind are common, and *primâ facie* suggest a long course of tipping. They are not the changes of a day, or a week, but the result of a long course of debauchery, and generally result in death. We do not assert that cases of ascites are *invariably* the result of drinking, but we do affirm that they are in a large proportion, and even to a larger extent than is imagined by the public.

*Fevers* present many varieties, and vary greatly in degree from a mild ephemera (one day's fever) up to malignant typhus or typhoid. They arise from specific animal poisons, which abound amongst the habitations of the poor, the dirty, and the intemperate of the crowded streets and alleys of our densely populated towns. It is amongst these morally and physically perverted specimens of our race that the fever germs find a most fitting soil for their own propagation and multiplication. For the spread of fever are required two conditions—1. The fever germ; 2. a suitable soil in which it can fructify. The human body in its normal and perfectly healthy condition is not prone to receive the fever seed. It must first be brought into a weakened and very unhealthy condition to render it prone. And we maintain that there is no surer way of bringing a human body into an unhealthy condition, and making it prone to the reception of fever germs, than by inducing a state of chronic alcoholism, which lowers the animal tone, poisons the blood, favours the accumulation of effete matters, and generally destroys that strength or tone of body which is necessary to resist the inroads of disease. Take any case of fever, and the diagnosis is easy enough, but the remote and predisposing causes of that fever are involved in mystery. Why has it attacked one man, and passed over his lodger, next-door neighbour, or even his wife? We believe that the predisposing origin lay in the unhealthy state of the sufferer's body at the time that he took the fever germ; and if the truth were known, and we could penetrate sufficiently deep into the mysteries of those processes, alcohol drinking, we venture to affirm, would be found to be at the root of many of those calamities. Is it not notorious that amongst the best writers on medicine we find a remarkable agreement in assigning to drunken habits a very frequent predisposing cause of fever? The state of intoxication for the time is said to be "a state of feverish excitement," and continued excitement may bring on a state of body most favourable to the development of the disease in question. When we find a registration of death from fever, how little does that fact convey to our minds as to its remote and hidden causes!

*Inflammations* constitute a large class of disorders to which alcohol drinkers are particularly prone. Derived from the Latin *inflammo*, to burn, and characterised by "redness, heat, swelling, and pain," these disorders bear a strong resemblance to the character and effects of alcohol upon the human body. An inflammatory condition of body is the universally acknowledged result of indulgence in alcoholic liquors; and this state is manifested by the bleary eyes, the reddened cheeks, and general plethora of the drunken. The body gets into a hypertrophied

and morbid condition, in which the least exciting cause lights up severe and dangerous inflammatory action, having its analogy in the old tinder-box which is fanned into a blaze by the slightest spark. Witness the unhealthy inflammations which are met with in every hospital of our large towns, in our "brewers' draymen," whose tissues on the slightest injuries take an inflammatory action of an unhealthy type, which constantly terminate in gangrene and death. The presence of alcohol in the body is always a source of irritation and morbid action. Incapable of assimilation, or even of decomposition, it irritates every tissue with which it comes into contact, and produces generally hypertrophy, with tendency to inflammation of an unhealthy type. The blood loses its plasticity, and the effusions, instead of being taken up again by absorption, or being organised by having a lower vitality, break down, and decompose, and die. This tendency to inflammation increases in exactly the same proportion to the quantity of liquor imbibed. The powers of life are enfeebled, and in this morbid condition the slightest exciting causes, as cold, produce serious inflammation of internal organs, which in a healthy condition of body would never occur. Numerous are the instances on record of inflammatory diseases abounding amongst drunkards, whilst sober men have been exempted, but neither time nor space will allow us here to enter into their details. Alcohol may excite inflammation in two ways. First, by its local irritating action; second, by the general excitement, and hypertrophy induced by its action through the general system. Alcohol permeates the whole system, and in doing so it comes into contact with every nerve and every tissue. It loads the system with inflammatory material, and at the same time lowers the animal tone, and favours the setting up of irritation and inflammation wherever it goes. It is in this upset of "nature's balance" that many inflammations have their origin. Old women, and unthinking and ignorant men, blame the "cold wind," whilst other and more subtle influences have been at work. Blame anything but the alcohol is the rule with many, who are particularly blind to the ill effects of this narcotic irritant upon their bodies. Organisms in a perfectly normal state of health, bear exposure to very great changes of temperature without injury. It is the debilitated frame which prepares the way for the injurious action of cold.

*Lung Disease* is a more common result of alcohol drinking than is ever imagined by the unthinking and numerous herd of Bacchanalians. In the circulation of alcohol through the body by the blood stream it necessarily comes into contact with the pulmonary mucous membrane, and, viewing its general irritant and inflammatory action upon other parts of the body, we cannot

assign to it any less noxious property here. The bronchial mucous membrane is peculiarly sensitive, and it is through this sensitive membrane that alcohol partly finds its way out of the body, as is plainly evidenced by the smell of the breath of drinkers. How can the daily contact of a narcotic irritant like alcohol be in hourly contact with the pulmonary mucous membrane without producing unnatural irritation, congestion, and inflammation? A membrane thus brought into a state of unnatural irritation and congestion yields probably to the first attack of cold, and inflammation is the consequence, as evidenced by laboured breathing and cough, which, if not fatal at the time, leaves the membrane, even after recovery, peculiarly prone to another attack. This after a time becomes chronic and permanent, and may go on until it wears the patient out; or it may end in the deposit of tubercle and the setting up of "consumption," especially if there should be any hereditary predisposition in the family to such disease. Pulmonary diseases are frightfully on the increase at the present time, and it becomes an important question how far, and in what proportion, they are *primarily* attributable to alcohol drinking. Predisposing causes of disease are generally subtle, and difficult to find out; and in the case of alcohol people are particularly blind to its faults. If the effects of alcohol upon the human body were thoroughly known, and all its bad properties brought to light, we should find a terrible bill of mortality against it. Many mysterious cases of bronchitis, pneumonia, and phthisis might be thus explained. There cannot be a doubt amongst thoughtful and observant men in the medical profession that a large proportion of cases of consumption arise from the pernicious practice of alcohol drinking. And for some years a variety of phthisis has been described by modern authors as arising from this cause. Dr. Copland, in that masterpiece of medical literature, his Dictionary, says, "There is little doubt of the injurious influence of the intemperance of parents upon their offspring, and there is little doubt that the injurious effects are mainly evidenced by the *scrofulous diathesis* thereby generated in the children and developed either into external or internal tuberculoses in infancy, or into tubercular consumption in early or later epochs of life." . . . . . "*How efficiently are our legislators providing the incentives to the destruction of health, constitution, and morals, in the licences, and encouragements furnished throughout the kingdom to the abuse of intoxicating liquors!*" Many medical men have remarked upon the prevalence of consumption amongst dram drinkers. This subject opens out a wide field of inquiry, and should be pursued further.

*The Kidneys* are frequently affected by alcohol drinking, and the direct connection between this practice and those forms

of renal disorder which are so prevalent is too well known, and too universally admitted both by writers and practical physicians, to admit of denial. We venture to affirm that there are few (if any) medical men who have a reputation to maintain, or who are acquainted with the literature of their own profession, who will deny the connection existing between alcohol drinking and those obstinate and fatal forms of renal disorder which are grouped together under the head of Albuminurea, or Bright's Kidney—a disease the pathology of which has only been intimately known since the time of Dr. Bright. Of the countless thousands who perished in ages past before much was known of this disease and its etiology, we now know little, and shall probably know no more until the end of time. Hundreds of thousands must have perished from dropsy arising from obscure forms of "Bright's Kidney," which had their sole primary origin in the use of alcoholic drinks, of which neither the profession nor the world ever dreamed in these comparatively dark ages. Of one thing we are certain, from years of observation, study, and practice—viz. that the various forms of albuminurea are largely on the increase in society, and we have repeatedly traced the origin of these cases to alcohol drinking as clearly as the night follows the day. It has been our lot to meet with a large practice and experience in such cases, and we affirm that it is comparatively rare to meet with them in persons who are not habitual toppers. The kidneys suffer severely from habits of alcohol drinking, and no wonder, when we consider that they are the chief organs concerned in the elimination of this pernicious poison from the body. In these cases we have the usual effect of the contact of alcohol in producing unnatural irritation, and irregular action upon the renal organs. The continued irritation to which the kidneys are subject by the daily passage of alcohol through them, induces a series of pathological phenomena which may culminate ultimately in change of structure. Irritation, congestion, acute and chronic inflammation, desquamation of epithelium, and fatty degeneration, lead to impairment and loss of function, with organic change of structure. When the function of organs so important to life as the kidneys is interfered with or destroyed, other morbid changes ensue which may either end in dropsy, or in the effusion of urea upon the brain, which is generally fatal. If we address professional readers, we need not for a moment enter into any argument about the kidneys and the due performance of their functions; and if we address persons unversed in the anatomy and physiology of life, we need only say, that upon the due performance of the functions of the kidneys all healthy life must depend. All the worst forms of renal disorders exist in drunkards, and for the most part they are allowed to advance to an incurable stage before they are sought

to be arrested. We well remember the case of a fine and noble looking man, boots at an hotel, who sought our advice for this form of disease when it was too late to arrest it. For years he had supped the poison dram of all who in mistaken kindness had given it to him, and this disease was the result. He would have given a universe to have recovered, but, poor fellow, he was obliged to succumb. Did time and space permit we could enumerate scores of such cases. Let us not be deceived by the negative and feeble attempts which have been made of late to prove the destruction of alcohol within the organism, by the negative fact that it has not *all* been found upon analysis. It is eliminated in the form of alcohol, and may be distilled from the secretions by any one conversant with the principles of chemistry. We challenge the advocates of stimulants to show why nature eliminates one portion of alcohol entire, and appropriates another portion as food.

*Rheumatism and Gout* are diseases intimately connected with the drinking system. Upon the connection of the former with alcohol drinking there are some important facts and observations in the new volume of "Braithwaite's Retrospect" for July, 1870. But of the latter disease we may say that there is direct evidence of its connection with alcohol drinking. For the past nine or ten years our practice has been to a large extent amongst publicans, and we affirm, without fear of contradiction, that these diseases, and especially the latter, are the bane of this class. The name of a publican calls to our mind pictures of men bloated, and unhealthily seared in their moral and physical nature, and often limping about with thickened joints, martyrs to what is now technically called the rheumatic arthritis, or, formerly, rheumatic gout. These are but the outward signs of the refuse of matter, and disorder of the system within. Rheumatism is more immediately connected with exposure to cold and wet, but there is little doubt that the oft-repeated debauch, or the constant imbibition of alcohol takes off that acute edge of a man's health and strength which is the greatest safeguard against cold. In this way many attacks occur, and the primary cause to most men is involved in mystery. But gout is the openly acknowledged and universally admitted result of dram drinking; and we need not go much out of our way here to argue this matter. We meet with it professionally every week amongst publicans and their best customers; whilst teetotalers, who are equally under our care, are almost entirely exempt from it. We do not even remember a single case. It was said of old that the ladies of Rome in the days of its degeneracy were the subjects of gout, and it existed at an early period of the world's history. Sir W. Temple, after suffering from gout, said, "Whoever thinks of curing gout without great temperance, had better resolve to

endure it with patience." Atticus, suffering from gout, grew weary both of it and of his physicians, and, despairing of any cure, resolved to starve himself to death gradually,—and he persevered so far that he ended his disease instead of his life: thus good came out of evil. Sir W. Temple said that he had known so many cases get better whilst abstaining, that he placed more reliance upon temperance than anything else. Hence the old saying, "Patience and water-gruel good for the gout." An eminent physician, in his directions for the treatment of gout, says, "The whole secret consists in abstaining *in toto* from alcohol in every form, however disguised, or however diluted." "He must not take it either in the form of liquors, cordials, wine, or even small beer. I believe there never was an instance of a person having the gout who totally abstained from every form of alcohol." Another eminent physician said "there can be no doubt of the origin of gout from the potations of fermented or spirituous liquors in this country. Some people have freed themselves from this disease by *total abstinence*, which otherwise grows with our years, and curtails, or renders miserable, the latter half or third of the lives of those who are subject to it." The great Sydenham said, "If an empiric could give small beer only to gouty patients as a nostrum, and persuade them not to drink any other spirituous fluids, he might rescue thousands from this disease, and acquire a fortune for his ingenuity." The ancients declared that the gout was the daughter of Bacchus and Venus. Dr. Copland, in his Dictionary, remarks that "the wines which favour most the production of gout are champagne, new ports, and the clarets, but other wines have more or less influence." Dr. Cullen said that "gout never attacked those following laborious occupations, or who live chiefly on vegetable food, or who use neither wine nor fermented liquors." Van Swieten adduces instances too of persons who, by a life of luxury and indolence, have been subject to gout, but who never afterwards suffered from it when their circumstances required them to live abstemiously and laboriously. It is a remarkable fact that, in countries where wine and animal food are unused, gout is almost entirely unknown.

*Insanity.*—To the alcohol drinking habits of our countrymen may be attributed a very large proportion of that insanity which constitutes one of the worst banes of civilised life. Once establish alcohol drinking in any civilised community, and a whole retinue of evils, moral and physical, follow in its train. Insanity is one of the demoniacal satellites that follow in the wake of strong drink. Cause and effect here have been known and confessed for ages, have been remarked upon by physicians, and lamented over by moralists, throughout all time. Dr. Copland, in his immortal Dictionary, amongst other causes of insanity enumerates this,

and says, "that intoxicating stimulants are causes of mental diseases in most countries," "*but they are amongst the most influential of all the existing causes* in the lower classes, particularly in America, Great Britain, Ireland, and Germany." . . . "A large proportion of the admissions into pauper lunatic asylums arise from this cause, especially in large cities, and manufacturing towns and districts." . . . "The removal of the cause, with the use of sedative measures, often cures the attack, *but relapses and recurrences are more frequent in these than in any other class of cases.*"

*Premature old age.*—If the thoughtless and deluded drinker of alcohol, gloriously ignorant of the true effect of his beverage upon his own body, should have been fortunate enough to escape any of the foregoing calamities—and we may here remark that he has been a fortunate man indeed, and one in ten thousand if he has done so—there yet remains another opportunity of hastening to a close that life which has been given him for a better and a nobler object. Strong drink brings on premature old age, and this fact is, we believe, for the most part lost sight of by the miserable victims of Bacchus. Had we despotic power we would cause such a list of calamities and diseases to be painted over every public-house door, that the public should at least know what diseases they might expect to find at those establishments. If they of their own free will prefer that road which leads from competence and peace to indigence and misery, it should, as a matter of simple justice to the traveller, be marked with frequent beacons, as are our sandbanks and rocks at sea. As it is, there are none, save the noble ones which have been erected by our temperance friends, to whom be all honour for their philanthropy. They are doing a work which is divine in its mission, purely unselfish and beneficial in its performance, and can be only properly rewarded by the award of the Great Master—"Well done, good and faithful servant." Drinking makes rapid wear and tear upon the constitutions of its victims. A few months or years of hard drinking bring about the premature old age which thirty or forty years of honest hard labour would scarcely do. Passing strange that the gift of life should be so little appreciated, or the object of it should be so misunderstood that the owner of it should voluntarily bring on disease, and hasten it to a close. Yet that thousands do so is apparent to all observers. We need not enter at length into the changes in the system which are the forerunners in the drunkard of premature old age. They may be practically studied anywhere. Watch the effect of alcohol upon the drinker for a few months, and see how it will fast corrode him. His muscles waste away, lose their plumpness. The ruddy hue of youth fast disappears, its vigour and elasticity vanish. His eyes lose their lustre, and his skin is drawn into premature

wrinkles. Shakespeare in his day was keen enough to notice this effect of strong drink, and has described it in King Henry IV. —Chief Justice to Falstaff (a drinker):—

“Do you set down your name to the scroll of youth, that are written down old with all the characters of age? Have you not a moist eye, a dry hand, a yellow cheek, a white beard, a decreasing leg, an increasing belly? Is not your voice broken, and your wind short, your chin double, your wit single, and every part about blasted with antiquity? And will you call yourself young? Fie! Fie! Fie! Sir John.”

Upon the nervous system alcohol acts at first by blunting its acute insensibility, and, like other narcotics, after a time acts as a complete paralyser of nervous force, and hence the altered action which exists between the nervous system and all the other functions of life. How can such disturbances of nature's balance do otherwise than bring on premature old age? In the natural body death is a slow and steady process, and should only come after seventy or eighty years of hard but honest wear and tear. But the drunkard goes down to the grave by rapid strides. His body is more worn out in middle life than that of many a healthy man of fourscore years. Calcareous and earthy deposits abound in him, which weaken the sides of blood-vessels, and often in this way give rise to apoplexy. These premature earthy deposits in middle life in the drunkard have been remarked upon by anatomists, and they are the certain indications of those changes in the system which betoken an early dissolution—“and union with that earth, with which the drunkard's body is so soon to form an indissoluble union.” “Earth to earth, ashes to ashes, dust to dust.”

Time and space equally forbid us from going further at present. We feel that we have done but scanty justice to our title, having scarcely told a tithe of the mischief and evil-producing effects of alcohol upon the human body.



## THE PRACTITIONER'S DEFENCE OF ALCOHOL.

DR. ANSTIE, the able editor of *The Practitioner*, is ever ready to say all that can be said in favour of the dietetic or medical use of alcohol. We therefore look upon *The Practitioner* as the leading alcoholic journal, and anything it contains on the subject of alcohol always deserves our notice. In *The Practitioner* for July there was a review of a “Report of the Committee on the relations of Alcohol to Medicine,” by John Bell, M.D., Chairman, extracted from the proceedings of the American Medical Association. This report does not please *The Practitioner*, for Dr. Bell does not appear to look upon alcohol in the light of food, but

rather as a poison. *The Practitioner* says:—“The report, we must say, in the first place, bears evident marks of a foregone conclusion on the part of the writer. It can hardly be doubted that, being himself committed to teetotal principles, although he is willing to concede that alcohol may be a useful *medicine* under particular circumstances, he is determined not to admit its claim to be a *food* either in the stricter or the looser interpretation of that word.” It is easy to accuse Dr. Bell of being committed to teetotal principles, but he could probably show that his conclusions are the result of investigation, whilst the opposite opinions generally spring from want of inquiry. When we read or hear of the strange ideas regarding alcohol, entertained by the public, and, we are sorry to add, by some members of the profession, we are forcibly reminded of the old story of the blind teaching optics, and the deaf teaching acoustics. *The Practitioner* says Dr. Bell is determined not to admit alcohol “to be a food either in the stricter or looser interpretation of that word.” It would certainly be a very loose interpretation of the word that would justify us in calling alcohol food. If we are to call alcohol food on the grounds usually alleged on its behalf, namely, that it contains hydrogen and carbon, and that some persons think it is oxidised in the body, and, like the hydro-carbons of true food, furnishes heat and force—if on these grounds we call alcohol food, we must describe other hydro-carbons, and ether, and chloroform, and other poisons, as food. It would certainly seem opposed to common sense if we saw a man in a fit of drunkenness to say that he had taken too much food, and that all the morbid symptoms were the evil results of over-feeding. Any one free from a “foregone conclusion” as to the food action of alcohol, would say that the man was intoxicated, or, in plainer terms, poisoned. Attempts have been made to show that everything depends upon *dosage*—that a small quantity of alcohol may be food, and a larger quantity poison. If this distinction were admitted in the case of alcohol, it must be applied to other poisons, and there would be an end to all classification of foods, medicines, and poisons. We know that different doses of poisons produce different effects; but the poisonous action of various substances is so evident, that we do not err in calling them poisons, although the effects of moderate doses may not be exactly the same as those produced by larger quantities. Our idea of alcohol is that it is a poison, and that it is far more destructive of health and life than all the other poisons; and if at any time it should be proved that in some cases it really acts as food, all the objections to its use would remain unaffected by that discovery. *The Practitioner* says:—“It is necessary to insist as against Dr. Bell and all other people who argue in the same fashion, on the following points—(1.) It is certain that alcohol, equally with the hydro-carbons and hydrates of carbon of ordinary

solid food, is oxidised within the body.” This is unquestionably a short way of settling the question, by taking for granted that which ought to be proved. We assert that there has never been any *positive* proof that any portion of alcohol is oxidised within the body. It may be oxidised in the body, but the proof is yet to be furnished. What is really certain is, that when alcohol is taken into the body, some of it is expelled by all the organs of excretion; but, as the whole of the alcohol ingested has not yet been discovered in the excretions, it is not proved that the whole of it escapes from the body in an unoxidised condition. Drs. Anstie, Thudicum, and Dupré, have attempted to estimate the quantity of alcohol which leaves the body, and they assert that only a small proportion of the alcohol taken into the system passes out in the excretions. Their experiments were certainly not sufficient to justify their conclusions, and the question as to what becomes of alcohol when taken into the body is not yet settled. There is, however, great reason to doubt its oxidation, because when it is taken there is no increase in the quantity of carbonic acid excreted, no increase of temperature, and no force produced which our present means of investigation can discover. A second point urged by *The Practitioner* in support of the opinion that alcohol acts as food, is that “Alcohol in large quantities does generate fat in the blood to microscopic inspection; and it is surely *possible* that the fatty elements of tissues may be directly increased by the action of dietetic doses of alcohol. No doubt in the case of alcoholic excesses this would run in the direction of degeneration; but it is quite conceivable that, taken in moderation, the alcoholic hydro-carbon helps the formation of the most important kind of fat—that which assists in the building up of cells of every kind, and which, in the nervous system, is of pre-eminent importance.” To assume, because the excessive use of alcohol interferes with the depuration of the blood, and causes a morbid deposit of fat and a tendency to fatty degeneration, that therefore alcohol is food, is a curious sample of medical logic. How this interference with the action of oxygen and derangement of the function of nutrition can prove alcohol to be food, is to us quite incomprehensible. *The Practitioner*, however, says:—“It is quite conceivable that, taken in moderation, the alcoholic hydro-carbon helps the formation of the most important kind of fat.” It is equally conceivable that it does nothing of the kind; and the inference that, as excess is injurious, moderation is beneficial, shows that the advocates for the use of alcohol are not only able to say all that can be said in its favour, but a great deal more. It is, however, of little importance whether alcohol is called by its admirers food or poison. “A rose by any other name would smell as sweet,” and alcohol, if called a food, would not lose its power of producing disease and destroying life.

We will not enter into an examination of all the fallacies contained in the review we have been commenting upon; but there is one sentence we cannot overlook. *The Practitioner* says:—"If the teetotalers in our profession had their eyes open, they could not but perceive that they only deepen the gulph between themselves and the mass of unprejudiced physicians by special pleading which ignores obvious facts." We should like to know where we can find "the mass of unprejudiced physicians." We could easily find physicians who conform to the drinking customs of society, who use alcoholic liquors themselves, and recommend these liquors to their patients, and who have never studied the temperance question, nor tried abstinence. But "the mass of unprejudiced physicians," where are they? When a physician has lived all his life in society where alcoholic liquors are constantly used, and has acquired the habit of using these liquors himself, is it possible for him to be free from prejudice? We believe that every one is influenced by the customs of society, by education, and habit, and that all classes have, without suspecting it, a prejudice in favour of alcoholic liquors. We can recall the time when we laboured under this prejudice, and believed in the utility of a moderate quantity of alcoholic drink as an article of diet, and a valuable aid in the treatment of disease. We certainly did not form part of "the mass of unprejudiced physicians." We owe our emancipation from this prejudice not so much to our knowledge of physics, chemistry, physiology, and pathology, as to a special investigation into the question of abstinence. We began by trying abstinence on ourselves, and by carefully studying the cases of persons who took alcoholic liquors very sparingly, and we saw that they were as healthy in body and mind as persons who took more liberal quantities. We then examined the condition of persons who took none at all, and found that they were, if anything, all the better for their total abstinence. We extended our inquiry from the healthy to the sick, and our observation of the effects of abstinence, which has extended over more than thirty years, has convinced us that we formerly laboured under great error as to the dietetic and medicinal properties of alcohol, and that a great part of the profession as well as the public are under great delusions respecting intoxicating liquors. According to *The Practitioner* there is a gulph between the teetotal members of the profession and the mass of unprejudiced physicians. Now this gulph is caused by the different experience of the parties. The teetotal members of the profession have investigated the question, they have tried on their own persons the effects of abstinence, and have acquired an experience not possessed by the so-called "unprejudiced physicians." It is this experience which distinguishes the teetotal members of the profession from those who differ from them. Good and great

men, in the profession and out of it, are opposed to abstinence, because it is beyond their experience. The question of the dietetic and *therapeutic* action of alcohol cannot be scientifically settled by *à priori* reasons, or by bold assumptions, or “foregone conclusions,” but by experience, gathered in all the walks of everyday life, and at the bedside of the sick. It is this experience that has opened the eyes of the members of the profession who are teetotalers, and has set them free from the delusions so prevalent in the profession as well as among the public, as to the use and abuse of intoxicating drinks. *The Practitioner* contends that “when one investigates the hygienic effect of an article of diet which is almost universally employed, one ought to inquire, not what is the result of its excessive and extraordinary consumption by a small fraction of the population, but what is the state of health of the immeasurably greater numbers who take it in moderation.” Now we think that a better way of proceeding would be to ascertain whether the article is necessary. This is going to the root of the matter. Is alcohol a necessary of life? Are the people who use alcoholic liquors physically or morally better than persons who live without them? Hundreds of thousands of men and women in all classes of society, have from various motives given up the use of wine and all other alcoholic liquors; what is their condition? If we are to believe their testimony, they are all as well, and most of them a great deal better, through ceasing to use these drinks. We live in days of progress. The last thirty years have been fruitful in furnishing us with improved means of investigation, and many important discoveries have been made. But no chemist, or physiologist, has discovered any reason why man, or any other living creature, requires alcohol. It is certainly not a necessary of life, and to ignore this fact in investigating its hygienic effect is not the way to arrive at a rational conclusion. It is a kind of special pleading to try to disguise the cause of the disease, and crime, and death produced by alcohol, by ascribing it to excess, and by referring to the millions who use intoxicating drinks in moderation to prove the value of alcohol. We should like every one to inquire what it is that produces the excessive use of alcohol? Our opinion is, that the excessive use is one of the natural results of the moderate use. And that wherever alcoholic liquors are generally used there will be numbers of persons who will gradually become intemperate. It is no more possible for a great part of the population to use alcoholic drinks without some falling into excess, than it is for masses of persons to be exposed to the poisons which cause typhus or cholera, without some of the number becoming the victims of those diseases. The excessive use of alcoholic drinks is one of the physical effects of the poisonous action of alcohol; and just as many of us who are exposed to the poison of typhus

escape, while others perish, so many who are constantly exposed to the poisonous effects of alcohol continue to drink moderately; while others, unable to withstand the insidious subtle poisoning of the brain and nerves by the alcohol, become its victims, and in this way excess and all its surroundings are produced.



## EXPERIMENTS ON THE ACTION OF WINE ON THE HUMAN BODY.\*

IN the last number of this journal we gave an account of some interesting researches by Dr. Parkes and Dr. C. Wollowicz, respecting the action of alcohol and brandy on the healthy human body. Those researches showed that alcohol and brandy were neither necessary nor useful, but, on the contrary, that their use deranged the action of the heart, and tended to induce disease. As those researches were confined to pure alcohol and brandy a doubt was expressed as to whether the alcohol contained in wine would act in the same way. This doubt has now been removed by a series of carefully performed experiments with wine. The subject of these experiments was the same individual as was experimented upon with the alcohol and brandy, a healthy intelligent man of medium height and weight. The experiments were continued for thirty days, the man having abstained from any alcoholic beverage for sixteen days previously. During the first ten days water only was taken at dinner, during the next ten days red Bordeaux wine was taken instead of the water, half a pint of wine being given on the first five days, and a pint of wine on the last five days. The wine was taken at dinner-time at a quarter past one o'clock. In the last ten days water was again given. The wine was subjected to analysis, and was declared to be claret of good quality. The quantity used would be considered moderate by most wine drinkers. The problems to be solved by the experiments were the effects of the wine upon the weight—the temperature—the pulse—and the excretions. It appears that no obvious change in the weight of the body was caused by the wine. The effects upon the temperature were hardly noticeable.

“The result of all the observations was, that in the water period of ten days the mean temperature was  $97^{\circ} \cdot 726$ , and in the wine period was  $97^{\circ} \cdot 56$ , or  $0^{\circ} \cdot 166$  less, a difference so slight as probably to fall within the limits of unavoidable error.”

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\* *Experiments on the action of Red Bordeaux Wine (Claret) on the Human Body.* By E. A. Parkes, M.D., F.R.S., Professor of Hygiene in the Army Medical School, and Count Cyprian Wollowicz, M.D., Assistant-Surgeon, Army Medical Staff. (From the “Proceedings of the Royal Society,” No. 123, 1870.)

This result does not agree with the results of Professor Binz and other experimentalists as to moderate quantities of alcohol lowering the temperature of the body; still less does it support the popular opinion of the warming power of alcohol. But this notion, that wine or spirit warms the body, is still a common idea. Drs. Parkes and Wollowicz say:—

“We conclude that in health the apparent heat after wine must be owing, as in the case of alcohol and brandy, rather to subjective feelings connected with the quickened circulation than with an actual rise of temperature; but that, on the other hand, wine in the above quantities causes no appreciable lowering of temperature.”

It was upon the pulse that the most marked effects of the wine were produced. During the water period

“The daily mean of the pulse was uniform, the mean of the ten days being 76·3 beats per minute, the extreme daily variation was from 74·2 to 77·87.”

Thus the heart was doing its work properly without alcohol, but when the wine was taken the *irritating* action of the alcohol was soon exhibited. Drs. Parkes and Wollowicz say:—

“The wine increased the frequency of the heart’s action by  $4\frac{1}{4}$  beats every minute during fourteen hours in the day, and doubtless also in the remaining ten, for the pulse at eight A.M., was still too frequent during the wine period. In the twenty-four hours there was then an excess in the heart’s action of 6,120 beats, or nearly 6 per cent. As the amount of alcohol 1·1 ounce in the first five days, and 2·2 ounces in the other five, the increase in the number of the heart’s beats was slightly more than in the days when an equal quantity of pure alcohol was taken.”

The wine was taken each day shortly after one o’clock. The following extract from the tables will show its effect:—

	Water period.				Wine period.			
Mean number of pulse at 10 A.M.,								
after breakfast .. .. .	78·4	..	..	79·1	..	..	..	79·1
Mean at 2 P.M., after dinner .. .. .	83·7	..	..	86·8	..	..	..	86·8
Mean at 4 P.M. .. .. .	75·8	..	..	87·6	..	..	..	87·6
Mean at 6 P.M., after tea .. .. .	78·8	..	..	88·1	..	..	..	88·1
Mean at 8 P.M. .. .. .	76·6	..	..	82·1	..	..	..	82·1
Mean at 10 P.M. .. .. .	71·3	..	..	74·9	..	..	..	74·9

Here we see clearly that whatever else alcohol could not do, it could derange the action of the heart and *cause a waste of force*. It must be remembered that the dose of alcohol was moderate, such as some authorities say may be used safely, namely, from one to two ounces in twenty-four hours. In the case of this man it is evident that this so-called moderate quantity could seriously derange one of the important functions of life, without any compensating advantage, as there was no increase in weight nor in the production of heat.

There was hardly any alteration in the alvine and renal excretions caused by the wine. The elimination of alcohol in the

excreta was tested for with the solution of bichromate of potash in sulphuric acid. This test showed that alcohol passed off in the breath, the perspiration, and the urine. No attempt was made to ascertain the quantity passing off, but that some alcohol is thrown out of the body by all the excreting organs is now established beyond all dispute. These researches, though confined to one individual, are of great value from the careful way in which all the experimental observations were made, and the philosophic spirit in which the conclusions from them were drawn. Drs. Parkes and Wollowicz say:—

“The general results of these experiments are in all respects identical with the experiments on alcohol and brandy, that is to say, that there was a marked effect on the heart coinciding tolerably well in amount with the effect produced by pure alcohol in the former experiments.”

“In other words, claret wine in the above quantities cannot so far be distinguished in its effect from pure alcohol. Its most marked effect, the increase of the heart's action, must be ascribed to the alcohol in great measure, though the ethers may play some slight part.”

This appears to us to be a conclusion borne out by all we know of the composition and physiological action of alcoholic liquors. The alcohol is the all-important ingredient. If these liquors have any real value, they owe it to the alcohol they contain. It is perfectly ridiculous to suppose that the small quantity of ethers or salts and sugar in wine, or the glucose, indigestible gum, and bitter matter in beer, can be of any great value. These liquors owe to alcohol their power to excite, to depress, to narcotise, and to kill. There may be other noxious things in these liquors, but, as Dr. Bence Jones stated in one of his lectures before the Royal College of Physicians, “Alcohol is the chief poisonous ingredient of unadulterated fermented liquids. Like all poisons when not taken in too large a quantity, or too long continued, it has a medicinal action on which its dietetical value depends.” The question as to the properties of intoxicating drinks hinges upon alcohol. Is it a necessary of life? What is its action when introduced into the human body? As far as the researches of Drs. Parkes and Wollowicz go they prove that alcohol is not a necessary of life, but that it is capable of doing mischief. This is the doctrine of temperance advocates, who contend that alcohol is not necessary for health or strength, that its use produces disease and shortens life, and that abstinence from it would prevent a large amount of human suffering. The advocates of temperance have arrived at these conclusions by studying and trying for themselves the effects of the two opposite courses of drinking and abstaining. While our men of science, with all their scientific apparatus and improved means of investigation, have not yet clearly ascertained the physiological action of alcohol, the teetotalers have settled one point for them by proving from the practical experiment of

abstinence that all intoxicating drinks are alike unnecessary. This experiment of teetotalism has been tried by men and women of all classes, temperaments, and ages; not merely, as some persons would insinuate, by a few enthusiasts anxious to do good to others, but by hundreds of thousands with clear heads who wish to lead healthy useful lives. The result of this experiment is a demonstration of the great fact that men are better without alcohol than with it. None of the scientific investigators into the properties of alcohol have yet discovered any valid reason in favour of the common use of alcoholic drink, nor has any one yet proved that any disease is produced by total abstinence. We have never seen any morbid appearances caused by the disuse of alcohol, and in no anatomical museum can we find preparations showing change of structure caused by ceasing to use this poison.



## ALCOHOL AS A REMEDY IN CASES OF DEBILITY.

THE *Lancet* has called the attention of the profession to the question of "Debility and its Treatment," in an able article which we reprint in our present issue. We should be glad to see a good definition of the words "weakness" and "debility," as we are constantly meeting with persons who fancy that they are suffering from debility, and whose physicians have confirmed them in this notion. If we were to relate all the cases of imagined debility we have seen, our readers would feel disposed to doubt our veracity. Of course there are cases of real weakness and debility, and in these cases the skill of the physician is often severely tested. For it is so much the practice to tell patients who suffer from real or imaginary debility that they require wine or bitter beer to strengthen them that it is difficult to carry out a rational mode of treatment. The belief in the stimulating and tonic virtues of alcoholic drinks, the assumption that almost every disease is one of debility, and the general prescription of these drinks, are productive of a great amount of delusion and suffering. When wine or other alcoholic drink is prescribed to the weak, it may for a short time make them forget their weakness; but in our opinion the tendency of such so-called tonics as wine and bitter beer is not to remove weakness, but rather to increase it and render it permanent. There is also this danger connected with the recommendation of these drinks in debility—the patients soon acquire a liking for the alcoholic medicine, prescribe it for themselves, and recommend it to others. Dr. Samuel Wilks, Physician to Guy's Hospital, in a clinical lecture on "Alcoholic Stimulants in Disease," has pointed out the evils resulting from

the common mistakes respecting the action of alcohol. He said (addressing the students):—

“Endeavour, if you can, to erase from your minds that it is a proven fact that alcohol is a tonic or a necessary part of every one’s beverage. This is assumed by a large mass of people; and the meaning of the question which your patient puts to you when he says, ‘What shall I drink?’ is not ‘Shall I take a stimulant or leave it alone?’ but ‘Shall I take wine, beer, or spirits?’ He often confesses that he is in a great difficulty; he finds none of them agree with him; but that he must take ‘something’ appears as necessary as eating his daily bread; the alternative never having formed part of his calculation. I say it is assumed that a strength-giving property lies in these drinks—that just in proportion to a man’s feeling of weakness, so will he require one of them: in ordinary health he may only want his beer; but if ill, his wine; and if very ill, his spirits. Now this popular opinion is shared in, I am sorry to say, by many in the profession; if the patient is weak, he wants ‘support,’ this term carrying too frequently with it the necessary idea of wine or spirits. I should be sorry to say that the doctor panders to the public taste, since he is too often already in accord with it; but the consequence of such agreement between patient and medical man resolves itself into this,—that an extra stimulant is prescribed. You might ask to what complaints do I refer when I speak of this too common advice; but I need only repeat the word ‘patient,’ for it matters little what is the nature of the disease, since the reasons for the treatment are applicable to all complaints, and are founded on this simple proposition: all persons who are ill are weak; they have lost strength; they require it to be restored; alcohol is a supporter and a tonic, therefore alcohol is a remedy for all diseases. This is no parody, for I have heard the argument set forth in some such words; and practically it is adopted by many, for I constantly hear medical men say they give brandy to all their patients, for they always find them ‘low.’ Brandy indeed becomes with some as much a universal remedy as revalenta, chlorodyne, Morison’s pills, or any other quack medicine. Moreover, it is a medicine of which the patients approve, assuming as they do its supporting and strength-giving powers. You therefore cannot do better, if you fear no compunctions in converting your profession into a mere trade, to say to all your patients, after feeling their pulse, that they are very low—that you are sure they do not take enough; and order them several glasses of wine daily. Should they be exceedingly ill with some desperate organic complaint, then you must turn your remarks to the friends, and speak of the necessity of supporting the patient by giving him as much brandy as can be poured down his throat. By this method you are sure to give ‘satisfaction’; for, should the patient die without such treatment, you may have the credit of letting him slip ‘through your fingers’; whilst, if he die with it, you have done your best. If you kill a dozen patients with brandy, you need have no fear, ‘you have done your best.’ This, I say, would be a very comfortable and lucrative mode of practice.”

This kind of practice is dying out, but there is still great room for further reform. Doctors and patients stand in need of enlightenment. If it were not for the dire results of the use of alcohol there would be a fine subject for the pencil of Cruikshank in the medical use of alcohol. All classes of patients take it for all sorts of disease, and take it on the most opposite grounds or no grounds at all. But so many terrible results flow from the popular use and the medical misapplication of alcohol that the subject can only be treated in the most serious manner. Upon the question of the right use of alcohol depend the health and lives of millions of our fellow-creatures.

## Miscellaneous Communications.

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### THE CURABILITY OF DRUNKENNESS.

#### A SCIENTIFIC VIEW OF THE QUESTION.

By DR. JOSEPH PARRISH, *President of the Pennsylvania Sanitarium.*

INEBRIATES constitute a peculiar element in society. They are not criminals, and are not, therefore, amenable to legal punishment. They are not insane, and hence do not need confinement. They realise, however, for themselves, and the community is beginning to realise for them, that remedial appliances of some kind are needed for the purpose of enabling them to recover from the offensive peculiarity which distinguishes them from other men. They may possess intellectual or moral obliquities, or be deranged by positive disease, or by physical organisations for which they are not wholly responsible, and which a wiser philosophy than now obtains will some day trace to their pre-natal history.

For the purposes of treatment they should be divided into distinct classes. It is not to be denied that a considerable number (say 20 per cent.) are irreclaimable, and these may be denominated confirmed drunkards. Such are, either by reason of moral infirmity or structural disease (while exposed to temptations, at least), beyond the reach of entire recovery. The body is broken, and its vital force enervated. The will can no longer even assert itself intelligently, much less perform its functions. To protect such unfortunates and their families from injury, and their property from damage, the law should be employed, as it is in cases of other dependent persons. They might, with propriety, occupy an infirmary or hospital department in an institution designed for incurable inebriates.

The next class to be noticed are habitual drunkards, in whom the habit is not confirmed by supervening disease, but who drink daily or re-

peatedly, attend in some sort to business, and are frequently by night-fall, or later, narcotised. They sleep away the dark hours, and awake again with the morning to thirst and drink, to thirst again, and continue drinking. Such men, while they are able to attend to their affairs, do not often appreciate their real condition. It is difficult to convince them of their danger; and yet, when they once realise it, and submit to proper treatment, they are hopeful cases, yielding readily to remedial measures. Habitual drunkards generally fall into the habit almost unconsciously. Social influences, or perhaps business reasons, induce it. At first they have no fondness or longing for stimulants; the desire for them being created by creating the conditions which demand their use. The habit can be broken, however, and the counter-habit of abstinence established, while the moral nature can be trained to take new views of life; and when it comes to realise that drinking is neither essential to the enjoyment of society nor to success in business, it is not difficult for such men, after the system has been renovated, to confront the world again and be successful.

The next class to be named are periodical inebriates, in whom there is, in my opinion, frequently, if not universally, an inherent diathesis, which renders its possessors peculiarly susceptible to causes of excitement. It is difficult to define the condition to which I refer; but I know that in such persons disappointments and successes, afflictions and enjoyments, or indeed anything that is unusual in kind or degree, disturbs for the time being the moral balance,

and the consequent unrest, either in the form of enervation, or exhilaration, as the case may be, inclines them to seek a satisfying remedy. Some men drink alcoholic liquors, and others resort to opium, or similar narcotics; while such as have moral or religious convictions that are equal to the emergency, may seek repose and meditation, or congenial recreation, until the period shall have passed.

This is a most interesting and numerous class of persons. They are led by an uncontrollable impulse into excess, and suffer the keenest remorse and anguish of spirit when it is over. They should have a place of refuge to which they can go when they feel the necessity for it; and where they can remain under proper guidance till the spell (as they call it) is passed. Better still would it be if such men could remain in an institution long enough for their peculiar diathesis to be corrected or substituted. They would then be able successfully to meet the duties of life without the necessity of resorting frequently to a place of refuge for temporary relief. Having glanced thus briefly at the classes to be treated, and their several general conditions, the modes of treatment within the walls of an institution may be noticed.

No class of men are more jealous of their rights than drinking men; none value more highly their independence, and none resist more persistently any effort to control their judgment or impair their liberty. Admitting this position to be assumed by inebriates themselves, and admitting that the law does not presume to reach the first causes of intemperance, which reside in the individual, we find that our true method of approach to the inebriate is through his own sense of necessity as a diseased person. If his nervous system is primarily at fault, or his moral nature enfeebled, either by transmission or association, or if there is some local disorder for the relief of which he uses stimulants; in either case he is anxious for relief, provided he can obtain it without costing him his self-respect or

personal comfort. Thus, from the very nature of the subject, as we view it in its social and physiological aspects, there are certain prerequisites which at once suggest themselves as important in a well-organised home for the cure of such persons.

The fact that an inebriate surrenders himself voluntarily to the custody and care of an institution, is an admission on his part that he needs protection and guidance; and the fact that the institution receives him under such circumstances, implies a contract between them: that he, for his part, requires certain aids, which the institution, for its part, agrees to furnish, and it is due to both that the terms of the contract should be clearly understood.

The patient arrives helpless and dependent; his judgment, will, and all his powers being in captivity. The officer in charge, seeing his condition, proceeds at once to provide for his immediate necessities. If he arrives in a state of intoxication, he is placed as a sick man in the infirmary; and when sober, and able to take his place among sober and convalescent people, is invited to his apartment, and told that in the further treatment of his case his freedom will not be curtailed, except so far as it may be necessary by his agreement with the means that may be employed for his recovery; that he is under medical treatment for an infirmity, the danger of which no one experiences more than himself; that his diet, exercise, employment, indeed everything that he does, must be done with reference to the single object he has in view, namely, his recovery. He must govern himself, therefore, by conforming to the regulations which are prescribed for him, and which he accepts by accepting of the refuge offered him by the institution. He is not to regard himself, or to be regarded by others, as a criminal or a lunatic, but as a gentleman—citizen of a new community, in which he is to take an active part for a time and for a specific purpose. The social obligations and religious duties, as well as baths, drugs, diet, exercise, study, and rest, are to be considered

as parts of a recuperative and restorative system, the administration of which is in the hands of the physician-in-chief and his staff. Such a relation between the institution and its inmates being understood, and mutually conceded, must be continued on the basis of mutual trust and confidence.

These should never be betrayed by either party. The patient should not forget that an obligation assumed by act is as binding upon men of honour as if written with ink and ratified by a pledge. The institution should never forget that it is the stronger and fostering party; and if a patient falls into temptation and relapses, he must not be punished as a malefactor, but cared for in an infirmary.

As the great thing to be learned by inebriates is self-government, their association in an institution for mutual profit affords a good opportunity for trial in this direction.

On the part of the institution, it might be well to present each inmate, after his arrival, with a printed card containing the house regulations as to hours for meals, sleep, baths, &c., and a few brief sanitary instructions, with the signature of the physician attached. In return, the patient should subscribe to a code of ethics, upon which all should agree as a basis for their intercourse among each other and the officers. This code should embrace the following conditions:—

1st. A recognition on the part of the signers of the necessity for placing themselves under treatment.

2nd. An acknowledgment of the fact that, in order to promote the general good and comfort of all, they will cultivate a spirit of goodwill and accommodation toward each other and the officers, that there may be complete co-ordination of purpose and effort among all the members of the household.

Thus there would be a somewhat formal and yet simple and reasonable exchange of conditions, which all could readily understand.

In view of the difficulty of accommodating several hundred inmates of incongruous social and intellectual conditions under the same roof, with-

out some bond that can be mutually respected, or some mode of classification that will be appropriate and in-offensive, it is suggested that separate buildings, or separate compartments or sections in one large building be provided for distinct groups or families of patients; no single group to exceed twenty in number. Let each have its own appointments for lodging and amusement, and a corresponding section of a common restaurant.

Another provision should be made which, in my experience, has been found to be desirable, namely, the arrangement of suites of rooms for families. A husband may desire to accompany his wife, or a wife her husband; in which event they should be provided with private apartments. There are many such cases.

Groups or families, though located thus for social reasons, would, of course, meet together for divine worship and at public entertainments, as is the custom in the outside world. Such an arrangement would also admit of interchange among the several groups of those social amenities which are the expression of refinement and pleasure in general society. As far as may be, an officer of the house, or faithful employee, should domicile with each group. An infirmary should be located in or adjacent to the building, in which patients may be placed on arrival, as already indicated, and which might be used for special hospital purposes in the event of an epidemic or other calamity.

With such principles and agreements between the parties, and such arrangements of building and classification of inmates, the kind and quality of employment may be considered. For the purpose of occupation and entertainment, the inmates will naturally divide themselves into three general divisions:—

1st. Men of education, with tastes for literature, science, and art, who can always find agreeable and profitable pastime in the pursuit and application of knowledge.

2nd. Mechanics, clerks, and others of fair business experience, who have

been habituated to toil, and though without general culture, have a natural fondness for the beautiful in science and nature, and who are ambitious for improvement.

3rd. Idle men of means, who have little care for occupation of mind or body, except so far as they may be passive recipients of pleasure or instruction from others; and a class of artisans and employees who are satisfied with inferior pursuits and attainments, and exhibit but little purpose to improve.

To meet these several conditions, the natural and physical sciences, the arts and mechanics, are available for illustration and practical use. An announcement should be made that the institution contemplates not only physical and moral training, but the use of every means possible to beguile men into paths of sobriety and virtue, by lectures, music, readings, amusements, and studies, as well as by all the useful industries of husbandry and the mechanic arts. It should be a "university of social discipline," the grouping of its inmates being founded not on etiquette or diplomacy, but on real affinities, which would centralise upon mutual good faith as the common bond of unity.

No patient voluntarily committing himself, would fail to recognise the value of such a bond, or of the pleasing and useful occupations which it imposes; but should he fail to comply with the course prescribed, he could find his proper level in the infirmary. It is better for the institution and for the patient that such a standard should be established. Better for the institution, because it would not be annoyed by promiscuous association with incorrigible persons, who have no desire for reformation or cure. Better for the patient, because if he is willing to comply with the pleasing and improving course of life prescribed, he can scarcely fail to be benefited and finally recover. Better for inebriates *as a class*, because it draws the line between those who yield to curative means and those who do not; strengthens public sentiment in favour of the former, while it adds to the

popular conviction that the latter class should be restrained in a hospital or asylum designed especially for them.

The physician-in-chief should be assisted by a staff of intelligent and competent men, who would take charge of the several departments; and holding regular meetings, make their reports at least monthly, if not oftener, which should be tabulated under the supervision of the physician, and from time to time presented to the trustees and to the public. The information thus collected would furnish the means for supplying a great demand of the times, namely, an intelligent and scientific literature on the subject in hand. The institution would thus do good, not merely by reclaiming and restoring unfortunates, but by creating a public sentiment that would tend to modify the evil in its source.

I have not referred especially to chapel services, taking it for granted that all admit the necessity.

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In a report read at a meeting of the Directors of the Pennsylvania Sanitarium, held in May last at Philadelphia, Dr. Parrish says:—

"The idea of separate institutions for the treatment of inebriates, is an outgrowth of our modern civilisation, which has been developed in this country within a very few years. The Pennsylvanian Sanitarium is the latest and most unique Exhibition of this idea. It was not a part of the design of its projectors, to establish a custodial institution for incorrigible or irreclaimable inebriates, but a hygienic home, where those who might desire to recover from the habit of intoxication, could voluntarily resort, and receive such assistance, as would aid them in efforts to restore the physical energy, elevate the moral sense, and fortify the will, so as to qualify them to return again to the duties of life, and confront the temptations incident to our existence, with safety and success. Such was our ideal.

"With this general view of the subject, the beautiful premises now occupied by the Institution at Media were procured, and fitted up, at con-

siderable cost, for the reception of inmates.

"In June, 1867, the doors were opened, and two young men entered. Since that time, 134 persons have availed themselves of its advantages. Three of these were committed under the law providing for committees, in cases of 'Lunatics and Habitual Drunkards.'

"We would not have it understood, however, that the remaining 131 were all volunteers, in the strict sense of that term. Twenty-three were brought in a state of unconsciousness. Thirty-nine consented to come as an alternative only, having been threatened at home with commitment to Lunatic Asylums, with divorce, banishment, or other disgrace. They submitted therefore, but not cheerfully. Sixty-eight, however, came in compliance with their own volition and judgment, and expressed a desire to recuperate and recover.

"Thus the ideal with which we commenced has not been fully realised; nearly one-half the inmates having entered the institution, either in a state of narcotism, or with a secret protest against the proceeding, accepting it only as the best they could do, to avoid something they dreaded more.

"Forty-four, or about one-third of the whole number, were afflicted with troublesome, and in some cases with serious complications, in the form of epilepsy, paralysis, rheumatism, pulmonary tubercle, neuralgia, heart disease, &c. &c.

"Eighty-four were married men, who had of course their bitter domestic sorrows, from which we dare not withdraw the veil that conceals them from public gaze, but which were a constant drain upon the nervous forces, and interfered with the calm and continued effort that is necessary to complete recovery.

"Fifty were single men, who had endured many severe conflicts with adverse circumstances, such as only this class of men realise, as threats and privations at home; dismissal by employers; abuses, losses, disgrace; to say nothing of painful convictions

and remorse. All, or either of these, would be likely to create unrest or melancholy; and the fruit of melancholy is too often a desire for stimulants. Yet with all these pent-up, self-consuming emotions, the average duration of treatment has been 100 days, and the average results good, as we shall presently see.

"But few persons are competent to appreciate the effort it costs an inebriate to submit to the regimen of an institution where his personal liberty is preserved; and fewer still can fully apprehend the value of such an effort to the individual himself. By the practice of self-control, and self-denial, his moral nature and self-respect are both improved, and he realises that he is commanding the admiration and encouragement of those who are interested in his behalf. There is a heroism in such voluntary struggles, which is the earnest to such men of ultimate conquest, and they should have the unremitting aid and counsel of all good persons.

"In view of the peculiar disabilities which encompass and afflict these distinct classes of drinking men, and the want of confidence on the part of their friends in any efforts to reclaim them, what ought to be expected? What is the result?

"It may be said, in answer, that with the several classes referred to, mixed and ungraded as they have been, 33 per cent. have recovered, while a large majority have improved.

"If, however, the sincere volunteers are taken separately, and the recoveries from their number estimated, the result will show 66, instead of 33 per cent., proving that the presence of unwilling and resistant cases reduces the general average one-half. Our own records justify this conclusion.

"An answer concerning the whole number may be given more in detail, thus:—

"So far as we are informed, 29 out of the 134 have returned to their cups, without any positive evidence of improvement.

"22 have improved very decidedly, so that they find it more difficult to

become debauched than formerly, while the intervals between their revels are more protracted.

"16 have not been heard from.

"45 have recovered and resumed their avocations in life. 2 are insane. 3 are deceased, and the remainder are under treatment.

"We believe, therefore, that we have a claim upon public notice and favour,

when we can come before the community with such results, especially in view of the fact that they have been obtained during an experimental period, in which we have had to contend with a doubtful public sentiment on the one hand, and an inability on the other, to make the necessary selection of cases to secure the largest percentage of recoveries."



#### DR. G. ROSS ON ALCOHOL, TEA, AND COFFEE.

ON Monday evening, 12th December, a lecture on "Alcohol, Tea, and Coffee," was delivered by Dr. Ross, Medical Officer of Health for the St. Giles's district, in the National School Room, Bury Street, Bloomsbury. The Rector, the Rev. Capel Cure, M.A., occupied the chair, and there was a large and intelligent audience present. The lecturer commenced by observing that if we were to invite the representatives of all nations to a banquet at which they would themselves have to provide the beverages they most liked, we would have some such liquors as the following:—The ancient Egyptian would drink a beverage he had made from barley, the ancient Jew and Greek would drink wine fermented from the grape, the Tartar and the East Indian different forms of arrack, the Chinese a beverage distilled from rice, the German his Bavarian beer or his wine from the grapes of the Rhine, the Frenchman his champagne, claret, Burgundy, or "O. D. V.," but the Englishman, in addition to his native drinks, would not object to tasting the others all round. From this some persons might be disposed to say that if all peoples from the most ancient times had been in the habit of indulging in spirituous liquors, surely there must be something in the physical constitution of man inciting him to indulgence in some intoxicating liquors. This opinion would be further confirmed by what fell from the drinker's own lips—"I really can't do without this drink. I feel the better

and stronger for it, and have more mental and physical energy. In fact, I cannot do without my glass of ale or of brandy and water." If they trusted what such a man said, they would be apt to jump to the conclusion that there was some constitutional necessity rendering it imperative that he should drink his favourite liquor. It was no such thing. A healthy man required no stimulant. A healthy man could undergo more mental fatigue without stimulants than he could with. He meant in that lecture to assert nothing but what he could prove by fair and physiological induction. It was well known that men liked these liquors because they improved the social qualities, threw away the load of care from the heart, and the cloud of sorrow from the brow. They liked them, also, because they made them more cheerful and so on; but what came after all these feelings produced by alcohol? There was the to-morrow. Did the drinker feel quite as comfortable then as he did the night before? The fact was there was always after this great excitement or stimulation a corresponding depression which told more against him than any advantage he could derive from over-stimulation the night before. Arguing the question simply on a physiological basis, the Doctor then proceeded to prove to his hearers that from the constitution of their nature and the operations of their vital economy, alcohol was not a beverage which could in any way assist the operations of nature, but which

was rather detrimental than otherwise, except under conditions which he would show as he proceeded. The body, as they all well knew, was sustained in health and vigour by the introduction into it of a number of materials which were used as food. They also knew that the waste material in the body must be thrown out of it, and that each operation of the animal economy—anything which involved mental or physical action—destroyed material, or, in other words, destroyed the body. Once in a month, or between that and forty days, it had been computed that the body underwent repair. If that were so, it was clear that new matter must be taken in to replace the old. If, however, they kept in the used-up matter, it acted as a poison in the system. That was a fundamental principle which it was highly important that every one should remember. There was, besides this process of nutrition, the one of respiration. The oxygen of the air entered into the lungs and was carried to all parts of the body, burning up this waste material just as the gas in a pipe was burnt up, the result of which was the giving out of a great quantity of heat. In order that these two functions might be performed, two classes of food must be taken. One must be flesh-forming food, and the other heat-forming food—one class to form flesh, and the other to give out heat. Referring to some diagrams, the lecturer called attention to one which had to do with fibrine, albumen, and caseine. The first meant muscle, the second white of egg, and the third cheese. These represented the flesh-forming foods. All of these possessed nitrogen in an almost equal degree. When taken into the human body they were easily transformed into human flesh. Heat-giving foods were represented on another diagram, as being fat, sugar, and starch. In alcohol there was no nitrogen, and consequently it could not support the body, and it would be a scientific absurdity to expect it to do so. Neither was it a heat-giving substance. The question as to whether alcohol was a food or

not, was a point on which even authorities differed. Some philosophical men, in recently published books, maintained that it was, but how did such writers show this to be so? Could it make muscle? No. Could it produce heat? Well, these persons said, "Yes, but it does not do so by its own composition." He supposed by that they meant that the breaking up of the alcohol into its elements did not produce heat, but only indirectly, as any other stimulant might. How did alcohol act upon the system? It first stimulated the stomach, and made the system feel warm, next it stimulated the gastric juice, and if that were all, he should say that no great harm was done. But they must understand that when food was taken into the stomach, it must be converted into albumen or caseine, and it was a property of alcohol to precipitate this albumen, and before this albumen could be received into the system, to be converted into flesh, it must be in a liquid state. If anything were introduced into the system that made the albumen solid, it of course frustrated the purpose of nature, and destroyed the digestive powers. Alcohol had that effect, for it interfered with digestion, and impeded the process necessary to the maintenance of vitality, besides acting upon the coats of the stomach. If the food introduced into the body were dissolved in water, the water promoted the absorption of food; but if alcohol were introduced, to the extent to which this was done, would the absorption of food be impeded. If his hearers took alcohol at all, they must be careful to dilute it in a considerable quantity of water, or else their digestion would be destroyed. In taking alcohol during the digestion of food, they first precipitated their food and interfered with its absorption, and in the next place injured the coats of the stomach. But this was not all, for alcohol next got into the blood, through which it travelled over every part of the system. It got to the liver and produced all sorts of mischief, and into the brain—but of its effects there he need not say a word, as they were appa-

rent to all. Alcohol taken into the blood underwent no change at all. As it passed into the blood, so it came out. If, for instance, they were to take a drunkard's brain and apply heat to it, the alcohol could be distilled from it. Did any reasonable man suppose that to be food which passed in and out of the system without undergoing any change? Surely not. Alcohol had, besides this, another effect, for in some peculiar way it prevented the alteration of tissue, and suspended the operations of the animal economy. If life, health, and vigour were to be maintained, change must go on; and anything preventing it, so far as its influence extended, did positive harm. Well, then, alcohol prevented change, and caused the retention of waste matter in the system, the consequence being gout and rheumatism. After being introduced into the stomach, and communicating with the blood, alcohol next attacked the liver, the result being biliousness. Supposing the alcohol to have been taken over night, the next morning the drinker would find no digestion of his food going on. After the bilious attack the liver became stimulated, inflamed, and enlarged, and wasting took place. After the liver became disorganised, the alcohol attacked the heart, which began to get diseased, enlarged, fatty, and the vessels to ossify. Alcohol in the blood had the effect of precipitating fat. It prevented the fat being burned off, and the consequence was that the fat got deposited in the tissues. When a man began to drink wine or beer at the age of between twenty-five and thirty, one of the first effects was to give him a full, plump, and rosy appearance, which deceived his friends as to his condition. He was all the time laying down fat. The next effect was an injurious one, because the fat began to be deposited in his organic tissues, the result being fatty disease, which brought on premature old age. Diseases of this kind might be brought on by other causes, but they were amongst the principal effects of alcohol. Such facts were hardly known by any persons save

medical men, but there were other effects of alcohol which were patent even to the most casual observer. If any one were to stand outside the door of any of the London hospitals, and watch the people as they entered, they would see the ravages of alcohol. He had no hesitation in saying that three-fourths, at least, of the diseases in our hospitals were induced by drink. Dropsy, heart disease, liver and kidney complaints, were, to a large extent, brought on by drink. These were facts both awful and sad, and he thought that no man who was acquainted with them, and had the opportunity of meeting his fellows, ought to shrink from the responsibility of making them known. He did not profess to be a temperance pleader, or to come before his hearers to advocate any popular principle of that kind, but merely as a scientific man impressed with the idea that he ought to tell the public what he knew of the matter. In justice, he must, however, say that all drinking of alcohol was not bad. He was sometimes obliged to recommend alcohol. People required a stimulus, and he sometimes prescribed alcohol, but never as a food or an habitual drink, but simply as a medicine. That in fact was what alcohol really was—a medicine. Of stimulants, as a family, he was obliged in fairness to say that alcohol was one of its best members. He would now point out those classes of persons who were benefited by alcohol. They were weak, feeble, and debilitated people. He was not speaking of persons who had brought these symptoms on themselves by their drinking or other habits, but of those who were constitutionally weak. Only the other day he felt it his duty to prescribe six glasses of wine a day for a gentleman. That was a large quantity, but the patient was the better for it. He had reduced himself by a long course of hard work to such a state of debility, that he (Dr. Ross) could do nothing with him without giving him alcohol. A lady also was reduced to an almost similar state, and a prescription of wine did her good. These were cases in which

alcohol was necessary. Let them not have prejudices, but look at alcohol as reasonable and sensible men desiring to ascertain the truth. Another class of persons requiring alcohol was the aged. It was a curious fact that this class would bear more alcohol than young people. The healthy young did not require it—they were poisoned by it. If a man in the full vigour of health took alcohol, he kept in his system material he should get rid of. If a stout man took it he became stouter, and brought on a tendency to apoplexy, and did himself an enormous injury. Old people could bear more alcohol because their powers were failing. With the exceptions he had named alcohol was an enormous evil, and one to be avoided by every sensible, good, and virtuous man. The man who worked hard, physically or mentally, might suppose he required it, but he could assure him the best way to restore exhausted nature was by rest, and not by alcohol. If alcohol excited, they must also remember that it depressed in a corresponding ratio. Dr. Ross, in concluding this part of the subject, referred his hearers to a diagram, showing the quantities of alcohol in different kinds of intoxicating liquor. He then proceeded to speak of tea and coffee, which he called sedatives and nerve-restorers. They had a very calmative effect, and were quite opposite in their effects to alcohol. Alcohol kept the waste matter in the system, tea and coffee helped to get rid of it. Alcohol stimulated the brain, tea and coffee soothed and supported it. Tea and coffee had, however, very different effects upon the human system. One element of superiority in coffee over tea was, that it contained more fatty matter. A great deal of dyspepsia was produced

by taking strong tea, and the tannic acid it contained precipitated albumen like alcohol. The wealthy knew full well that tea did not agree with the stomach after a heavy meal, for they always provided coffee for their guests. In conclusion, Dr. Ross said he claimed merely to have stated the case as a physiologist. He had “nothing extenuated, or set down aught in malice.” If he had given any information which would induce any of his hearers to abandon the use of spirituous liquors, which destroyed bodies and souls, he should have done good to them, and furnished them with some weapons with which to do good to their fellow-creatures. Not only were their hospitals filled with persons labouring under diseases brought on by drink, but their asylums were filled with lunatics, a large proportion of whom were brought into that most pitiable condition by drink. So also they knew that the gaols were filled with those who had been led into vicious courses, and into the commission of brutal crimes, through the habitual use of ardent spirits. These were results with which all were well acquainted. A little to the south of that neighbourhood—in Drury Lane—they might see miserable wrecks of human beings, and the dreary shades of a long lost purity, who were brought to their present condition by that abominable health-destroying and soul-destroying practice. If he could only convince any one, not merely upon moral grounds, but also upon physiological grounds, that the practice of taking alcohol was one of the most deplorable, destructive, and hateful in its consequences that could possibly be indulged in, he would have accomplished the object for which he had delivered the lecture.



## THE RATIONAL TREATMENT OF DRUNKARDS.

MANY of our readers may probably recollect that early in March Mr. Dalrymple, M.P. for Bath—a distinguished member of the medical profession, who

has made insanity his special subject—attempted to obtain from the House of Commons a resolution to the effect “that it is desirable to legislate for

the proper reception, detention, and management of habitual drunkards." Although it must be generally admitted that legislation for such an object is most desirable, there can be no doubt that the subject is embarrassed by many serious difficulties. Mr. Bruce, and the other speakers who were hostile to the proposed measure, referred to the impossibility of defining "habitual drunkards," and to the danger that might result from the abuse of a power of detaining persons of that class in asylums. These difficulties seem to be more apparent than real. The first might easily be met by providing that, after a certain number of summary convictions before a magistrates' bench, the offender should be tried before a jury for habitual drunkenness, and, if found guilty, that he should be sentenced to a period of detention in a special asylum or reformatory; and as responsible visitors to these asylums would doubtless be appointed, there would be no greater risk of injustice in carrying out the provisions of the proposed law than now exists in the case of lunatics.

It must be recollected that there are two distinct classes for which Mr. Dalrymple and his supporters propose to legislate, namely, first, those who, feeling that they need supervision and a certain amount of restraint, seek it voluntarily; and secondly, those whom it is desirable to seclude by compulsion. It is the second class alone—those habitual drunkards who might personally object to anything like enforced seclusion—that would be likely to occasion much trouble; and we admit that at present we do not very clearly see the best method of treating them. If, as we hope will be the case, Mr. Dalrymple ultimately succeeds in carrying his measure, in a more or less modified form, we trust that perfectly distinct institutions will be established for these classes—the former requiring a Home or Asylum, and the latter a Reformatory. We are strongly impressed with the necessity for this distinction from the careful study of the Superintendent's Annual Reports of "The New York

State Inebriate Asylum," an institution which, although as yet little known in this country, must be regarded as the type and model of all such asylums.

The Binghamton Asylum (as it is commonly called) contains three classes of patients—namely, "free," "paying," and "committed" patients. Women are not received, but a separate establishment will probably soon be provided for them. If a "free" bed is applied for, the applicant or his friends must give proof that he has a permanent home within the State, and that he is unable to remunerate the Institution for his support; and he must furnish a certificate from a county judge, or the mayor of New York, that he is a proper person to be received as a free patient; after which preliminaries his case will be referred to the discretion of the "Committee of Management and Discipline." For "paying" patients the terms are twenty dollars (£4) per week, with payment of three months in advance; but the Committee have the power to reduce these terms if they see fit, in special cases. No money will be refunded should the patient leave before the expiration of the three months without the consent of the Superintendent. Of "committed" patients all we know is, that "the committee of an habitual drunkard duly appointed under the provisions of the laws of the State can place such habitual drunkard in the Asylum, and authorise his detention under such restraint as may be necessary to prevent his escape."

It is in consequence of the trouble and annoyance that the Superintendent has received from this last class of patients that he strongly urges the establishment of Homes and Reformatories as distinct institutions. In the Report for 1868 (the last we have received) he writes as follows: "This Asylum, I take it, is designed to appeal confidently to the reason and conscience of a class neither mad nor utterly depraved; and from the best of these to restore to society and the State so much of usefulness and ornament, honest productiveness and in-

tellectual influence, as will repay the commonwealth tenfold for the cost of the experiment. To introduce, therefore, the element of confinement and coercion is to degrade the Institution from its true character, as a saving and ennobling home of faith and inspiration, into a mere house of correction or a gaol.

"So, also, to receive within our walls the forced commitments of a court, or the common seizures of the police, is at once to impair, if not destroy, the philosophical value of the experiment; and, what is worse, to embarrass the discipline and lower the moral tone of our probationary household.

"I can confidently assert that the introduction of disorderly and worthless cases of this class has been surely followed, in each instance, by an appreciable dissatisfaction and demoralisation among the inmates of the Asylum—to the best of whom they are an offence, and to the others a hostile influence and a temptation. I rejoice that hitherto they have been so few in number."

We have given this extract without abbreviation, because it expresses the matured opinions of a physician of unequalled experience in the management of cases of drunkenness.

There is a general impression in the country that the Binghamton patients are submitted to some mysterious method of treatment which has the power of destroying the desire for alcoholic drinks; and patients not unfrequently inquire, after a day or two, "when the treatment is going to begin." The sudden change from the excessive use of stimulants to the perfect abstinence that is enforced in the Asylum, often occasions intense sleeplessness. For this symptom bromide of potassium has hitherto been found the most efficient remedy; but we shall probably soon hear that it has been replaced by chloral. Moreover, the whole bodily system is often so thoroughly enervated and exhausted by a long course of dissipation, that a more or less tonic treatment becomes necessary; but here the bracing, highly oxygenated atmosphere

of the lofty ground on which the Asylum is situated is found to be the most valuable element in the mode of treatment. There are certain organs which are especially liable to become diseased by the excessive use of alcohol, namely, the brain, the stomach, the liver, and the kidneys; and if the patient has the misfortune to suffer, either congenitally or otherwise, from a scrofulous or other constitutional taint, some of these organs are almost certain to be affected. It is found that, until such physical ailments as these are removed by the ordinary medical treatment, moral restraint is of no avail, since the patients seem temporarily deprived of all power of self-control. In these few sentences we have included all the strictly *medical* treatment that is pursued in the Asylum. Assuming then, as we do, that inebriety (taking it in the sense of habitual drunkenness) is a disease, how is it to be treated, if not by the ordinary weapons of the *Materia Medica*? The talented Superintendent, whose experience in this department far exceeds that of any other physician, maintains that "the fundamental basis upon which all hopeful treatment must rest lies in the desire of the patient himself to escape from the slavery that enthrals him." Instances occasionally present themselves in which the patient will not co-operate with the physician; but happily they are rare, and are found only amongst those whose moral natures are imperfectly developed. In over two thousand cases it has been found that ready submission to, and co-operation with, treatment, have been universal, and that, in a large majority of them, this compliance with the means of recovery has been prompted by the patient himself. Although no rational man can subject himself to the protection of an asylum without a certain sense of sorrow and humiliation, yet the motive which prompts partial seclusion and restraint may be welcomed as a first step in the right direction. On entering upon his new life the patient tacitly admits the necessity of remedial treatment, and by consenting to

a strong personal sacrifice, gives evidence of the sincerity of his wish to reform. Another obvious advantage of seclusion lies in the protection which it affords from temptation to be led astray by injudicious acquaintances, and from many of the daily cares and troubles of active life, which lead the drunkard to seek temporary rest in the oblivion of intoxication. Again, the influence of the patients on each other is one of the strongest moral forces that can be utilised in remedial treatment; for no class of persons is so susceptible to surrounding influences. Dr. Day not only insists on the total abstinence of his patients while they remain under his care, but during the remainder of their lives. He bases his opinion on the fact that, "in an experience of twelve years' constant intercourse with inebriates of all ages and dispositions, he has never known a man, who had been intemperate, to be able to drink at all without falling again into excess; and that he has known, and now knows, of many instances where, by practising total abstinence, such a man has been restored to the full powers and enjoyments of health." We believe that, on this point, he is a little dogmatic; as in our own limited experience we are acquainted with several instances in which persons who were at one time habitual drunkards have become thoroughly reformed, and yet drink beer, wine, and even spirits in moderation, with advantage rather than with harm to their constitutions; but, in the great majority of cases, we believe that he is right.

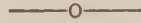
We trust that we have succeeded in convincing even the most sceptical of our readers that an institution like the Binghamton Asylum, without its "committed patients," might fairly be tried in this country. The success of these Homes in America has been established beyond question. The first institution was opened at Boston in 1857, and is still flourishing under the title of "The Washingtonian Home"; since then "The Sanatorium" at Media, near Philadelphia, The New York State Inebriate Asy-

lum," at Binghamton, Asylums at Chicago and San Francisco, and "The New York City Inebriate Asylum," have come into action, and are all doing good work. In the British North American provinces an active movement is now going on in favour of the establishment of such institutions, and there is every probability that, in a year or two, there will be a Home for Drunkards in Nova Scotia.

Can it be urged that there is no necessity for such institutions in Great Britain? Let us answer the question by an appeal to statistics generally, and especially to those contained in a Report of the Convocation of Clergy of the Province of Canterbury on the subject of intemperance in that large portion of England. This Report, which was published last year, contains an enormous mass of evidence bearing on the amount of drunkenness, and the evils to which it gives rise, collected from medical men, from chaplains of prisons and workhouses, from governors of workhouses and gaols, and from the working clergy. From this evidence, and that afforded by other sources, it appears that there are about 600,000 habitual drunkards in the kingdom, of whom considerably more than one-half might be reclaimed if our treatment was as successful as that at Binghamton. A large proportion of this vast number are men of education and comparatively good position. The authorities of the War Office or the Admiralty could furnish startling lists of the number of officers who, during the last twenty-five years, have been compelled to leave the service of the Crown on account of habits of intemperance; and the magistrates presiding over the London police courts could adduce innumerable cases in which persons of high social standing, and professional men of all kinds, have become the victims of this madness. There are 43,000 lunatics in our Asylums, and the reports of these institutions show that a very large proportion of them are rendered insane by drink. The statistics of our prisons and penitentiaries tell a similar tale.

It is estimated that from 50,000 to 60,000 lives are lost in England every year by accidents and diseases which are caused by the abuse of intoxicating liquors. If we include Scotland, even the larger figure is probably below the mark. It is difficult to realise these numbers. If twenty persons are destroyed by a railway accident, there is a universal outcry throughout all England; yet we allow a destruction of human life to go regularly on, from year to year, without interference, and almost without remonstrance, *which is equivalent to the slaughter that would be occasioned by twenty such accidents on every*

*working-day throughout the year.* Again, if we were to assume that a pestilence had utterly destroyed all the inhabitants of two towns equal in population to Oxford or Cambridge, the loss of life would be actually less than that which is annually caused by drunkenness. With the possible exception of some parts of the United States and Australia, there is no country in which this vice is so common as in our own. Why, then, should we not attempt a method of treatment which has proved eminently successful on the other side of the Atlantic?—*Macmillan's Magazine for August* (abridged).



## DR. EDMUNDS ON THE TEMPERANCE QUESTION.

(From the *Methodist Temperance Magazine*.)

ON the important question of the use of alcoholic liquors, and the various positions taken up by those who use these articles as beverages, as stimulants, and as medicines, we [Editors of the *Methodist Temperance Magazine*] are pleased to inform our readers that during the year 1871 we shall be favoured with a series of monthly articles from the pen of Dr. Edmunds. These articles are intended to fairly traverse the whole question; and while they will be written by a well-known physician who is fully conversant with all the scientific details which underlie the physiological basis of Temperance, they will be couched in language and proceed by steps of argument that will be clearly understood by every youth who may peruse them. The following article is the first of the promised series:—

### NOTES ON THE TEMPERANCE QUESTION.—No. I.

BY JAMES EDMUNDS, ESQ., M.D.,  
*Late Senior Physician to the British Lying-in Hospital.*

"The priest and the prophet have erred through strong drink; they are swallowed up of wine, they are out of

the way through strong drink; they err in vision, they stumble in judgment."—Isaiah xxviii. 7, 8.

"The common people heard Him gladly."—Mark xii. 37.

The following propositions will not be disputed:—

I. That disease and premature death, casualty and misfortune, pauperism and insanity, crime and immorality, are produced by the use of alcoholic beverages; and that our present drinking habits are the great stone in the way of the social improvement and religious progress of the people.

II. That simple abstinence from alcoholic beverages would cure the present generation of sufferers from drink, and stop the manufacture of drunkards.

These propositions being admitted—it follows that all who profess to take proper care of themselves and of those who are dependent upon them—all who profess to lead moral lives, and all who claim to be influenced by religious motives, must abstain from intoxicating beverages, or be prepared to justify their conduct.

Universal history is exemplified

alike in the words uttered nineteen centuries ago: "the common people heard Him gladly;" and in the history of the present Temperance reformation. From the "common people" came the Temperance reformation, and it has gained its present position in spite of the ridicule, the indifference, and the opposition of the affluent, the educated, and the religious masses of the community; in spite of the teachings and the prescriptions of the doctors, and in spite of the preachings and the practices of the clergy. The principle of total abstinence from all intoxicating beverages was not derived from scientific data, nor discovered by learned generalisation. It sprang from the simple conviction that, "that out of which so much evil came could not be good, and should not be used." Happily, many of the foremost and ablest of our people are now to be found among those who privately practise and publicly advocate the principles of total abstinence from all intoxicating beverages. But there remain great masses of responsible people who are still content to rub shoulders in religious work with wholesale and retail publicans, and to give the sanction of their personal example to the use of these destructive and insidious drinks. Such persons do not deny—they frankly admit and they profess to deplore—the moral ruin and physical degradation which come out of the use of alcoholic drinks. They also admit that simple abstinence would work immediate cure and future prevention; but they cannot give up their drinking habits. How do they justify themselves?

No less a person than the Lord Bishop of Manchester is reported to have argued at a great meeting in the Free Trade Hall, in October last, "that alcoholic beverages were gifts of a beneficent Creator, and therefore should be used in moderation." This is one of the arguments with which abstainers are constantly met, and we may well examine the meaning of such phraseology, in order to learn what weight belongs to the argument which it involves.

The reasoning—if reasoning it may be called—is, "that alcoholic liquors should be used as beverages *because* they are the gifts of a beneficent Creator." By the phrase, "Gift of the Creator," the learned bishop must mean a production of nature, as distinguished from things manufactured by human ingenuity, but the expression is fallacious, inasmuch as the ingenuity with which man has been endowed is as much a natural agency as is anything else. Nevertheless, the phrase may have been used carelessly with the intention to distinguish things which are clearly necessary to man's existence—such as the air we breathe, the water we drink, or the food we eat—from other things, such as gunpowder, weapons of offence, or chemical poisons, which are not found in the order of nature otherwise than as the result of human contrivance.

If, however, we grant that the learned bishop used his words in that sense, it in no way follows that alcoholics—assuming them to be gifts of God—were ordained to be used *as food* for mankind. Arsenic is as much a gift of God as any other purely natural object, but does it follow that arsenic was ordained for our use *as food* because it may properly be called "the gift of a beneficent Creator"? Clearly not. Not only is this reasoning altogether fallacious, but the reasoning itself is grounded upon a statement which is not true. Alcoholic liquors are no more "the gifts of a beneficent Creator," than are murderous weapons or chemical poisons; alcohol is never found in the animal, vegetable, or mineral kingdom; alcohol is produced only by the artificial destruction of the saccharine principle of food, and it is always a product of man's contrivance. Nor is there anywhere a shadow of *à priori* argument in support of the allegation that they were ordained to be used as food for mankind.

Having shown that the bishop's main argument is unsound, and his premises untrue, we pass on to consider the word "*moderation*," which, as used by the bishop, is another frequent source of fallacy.

Reasoning is to statement much what arithmetic is to figures. Just as, with figures, one may mis-state them or miscalculate with them, so with facts, one may mis-state them, or may reason upon them incorrectly, and unless first the facts be clearly understood, and the premises accurately defined, one is only led further astray by the logical method. Now, upon the right understanding and proper use of the word "moderation" the remainder of the bishop's argument entirely turns.

It is clear that evils arising from the *abuse* of a thing furnish no argument against benefits which may be obtainable from its *use*. If one man use a knife for the purpose of destroying a fellow-creature, that is no reason why another man should not use a knife for the purpose of cutting a slice of bread. So of alcoholic drinks—if the evil results are referable merely to the abuse of these drinks, those evil results furnish no reason why the drinks should not be used—*using*, in this sense, meaning to apply a thing in proper mode and measure to proper purposes, and it involves the idea of *moderation*. But the word "moderation" is used by the Lord Bishop in such way as to beg the real question instead of to argue it—inasmuch as before it can be said that a thing should be used moderately, it has to be shown that it should be used *at all*. For instance, it would be absurd to say that a man should only lie moderately, or steal moderately, or murder moderately. Such actions have proved incompatible with the welfare of society; and therefore, apart from the injunctions of Divine revelation, and from the fact that they have been branded as crimes, and made punishable according to law—they are immoral, and they ought not to be done at all. In fact, the only position to take with regard to lying, or stealing, or murdering, is that of total abstinence. Just so the drinking of alcoholics has proved injurious to the welfare of society, and therefore is immoral and to be altogether abstained from. Those who dispute this position are bound to show that the evils which they acknowledge are due to the *abuse* of these

liquors, and that, by some proper and moderate *use*, those evils may be either avoided or counterbalanced.

Sometimes we meet with persons who appeal to certain texts in the Bible in order to justify their personal use of intoxicating beverages. There are so many Biblical scholars at the service of this magazine that it would be out of place for me to do more than suggest reference to "The Bible Commentary," by Dr. F. R. Lees and the Rev. Dawson Burns,\* a most able and scholarly work, and one which should be on the shelves of every one who has to deal with this phase of the question. But I may, perhaps, say that whenever I hear the Bible referred to for this purpose, I am reminded of the fact that persons were found to preach slavery and polygamy from the Bible in the pulpits of Christian churches, and that there is an old proverb to the effect that, "if it serve his purpose, the devil will quote Scripture."

Whether or not intoxicating drinks should be designated as "the gifts of a beneficent Creator," whether or not they or anything else, if used at all, should be used otherwise than "in moderation," are questions that could only be raised in order to throw dust in one's eyes. The issue really resolves itself into a question of account, and it is to be decided by impartially weighing all the results which are yielded to mankind. In the propositions which stand undisputed at the head of this paper we have already stated one side of that account. It is for those who use these drinks to make out the other side, and we challenge them to show us in what the benefits consist. If they shrink from that duty, we, at another time, shall bring forward all the items that can be mentioned, and do our best fairly to appraise and set out their value in order to strike a balance, and show whether wise, moral, or religious men ought to drink or not to drink.

4, Fitzroy Square, London, W.  
December, 1870.

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\* London: S. W. Partridge & Co.,  
9, Paternoster Row.

## DEBILITY AND ITS TREATMENT.

(From *The Lancet*, Oct. 29.)

It is very curious to notice the importance which the element of debility or weakness has assumed of late in the doctrine and practice of physicians. Everything has been referred to debility. Skin diseases, dysmenorrhœa, amenorrhœa, consumption, dyspepsia, neuralgias, and neuroses of all kinds have been regarded as so many various forms of one protean evil—debility. Not only so; in all acute disease, debility has been pronounced the symptom that needed most consideration. The tendency to death, not only in the continued and exanthematous fevers, but in the acute local inflammations, consists mainly in their exhausting effect. Whether the acute local inflammation was a pneumonia or a pelvic cellulitis, the practical truth was the same—that the patient's life was endangered by weakness. Of course one practical conclusion followed quick upon this theory. As all disease consists ultimately or mainly of debility—or, rather, as the danger of all disease consists in its tendency to produce debility,—the crowning and comprehensive duty of the practitioner is to uphold the power of the patient. He is to obviate the tendency to death mainly in one way—by the administration of remedies which sustain or stimulate the patient. Accordingly it has come about that patients in the most diverse states are to be seen everywhere, on the advice of their physicians, ingeniously shortening the intervals of their meals, and increasing the amount of them. Large quantities of animal food are taken in twenty-four hours, and this is accompanied with an equally liberal allowance of stimulant. Beer and sherry and brandy, along with beef and mutton, are the cardinal features of our present *materia medica*. Chops or sausages to breakfast, meat to lunch, and a good generous dinner in the evening, is the kind of programme of dietetic duty dictated by popular physicians now-a-days. We have come to regard debility almost as if it were a separate entity—a real

separate and special disease by itself. It is with the hope of trying to define more exactly the nature of debility and its treatment that we now write.

It is not difficult to understand the origin of our present views of debility as an element in disease. It dates from our discovery of the injuriousness of those measures which lowered the vital power of the patient—conspicuously of bleeding, purging, &c.; from the investigations of physiology and chemistry as to the effect upon tissues of diseased states; and from the freer use of common sense in regard to disease and its treatment. It is still more easy to explain the spread of present views of debility. It is only necessary to remember the simplicity and conciseness of this doctrine to understand the extent to which it has been adopted. That all disease is debility, and all true remedies are of the sustaining or stimulating order, is a most fascinating compendium of medical philosophy. Not only so, it involves the most pleasant duties and remedies. The physician studies to suggest pleasant forms of medicine, and still pleasanter forms of food, and the chief duty of the patient is to live as well as possible.

Let us, once for all, admit that there is a great deal of sound sense and true medical science in the recognition of debility as an element of disease. The slightest observation only is requisite to ascertain how pain, or uneasy sensations, or slightly increased secretions, as of the bowels or uterus, cause debility. And, as regards acute disease, only a little more observation is necessary to satisfy oneself of the rapidity and certainty with which fever—that is to say, a higher temperature than the normal temperature of the body—wastes the tissues and reduces the power or strength of the patient. This is true not only of the class of continued fevers, in which there is a peculiar depression of nervous and of muscular power, and often a peculiar degeneration of muscular tissue, but

true of all diseases attended with an increase of temperature, whether serious, like pneumonia or scarlatina, or comparatively unimportant, like a febrile catarrh, follicular tonsillitis, or an ephemeral fever. It is most true that disease and ailment are very exhausting, more exhausting than work; and that the most important duty of the physician is to maintain the powers of the patient, both because they are unduly depressed, and because it is chiefly by their integrity that diseased processes are to be gradually rectified. All medical practitioners are now agreed that it is necessary to sustain the patient's powers. We do not insist upon so obvious and so generally admitted a truth. We rather wish to say a few words in qualification of a doctrine that is obvious and apt to be abused.

The first thing we would say is that debility is not a separate entity; it is not a disease of itself; it is part of a general diseased state. And the great duty of the physician is to ascertain the nature of this general state, of which weakness is a symptom, and to remove that. This may appear a very obvious remark; but, like many obvious remarks, it is a very important one. It is not, we repeat, enough to see that a patient is weak; that is a mere symptom—a mere indication of something else. What we have to do is to find out the cause of his want of strength. And whatever removes this, whether it be medicine or food, though it be neither a bitter nor a stimulant, it is to all intents and purposes a tonic to this particular patient. It is by overlooking this obvious point that so much bad practice may be seen. A patient feels weak; and a careless adviser, accepting too simply the fashion of the day, and the first impressions of the patient, orders him increased nourishment, and, perhaps, a few extra glasses of sherry or port in the day; with no other effect than that of adding to the weakness and discomfort of the patient. Perhaps the patient is labouring under a slight rheumatic *malaise* of the system, which has not declared itself in any

but slight symptoms—slight lithiasis, slight pains, a little loss of appetite, and undefinable debility. A light alkaline treatment and abstention from beer, and perhaps from coarser forms of animal food, may be all that this patient requires to restore his natural appetite for food, to clear his urine, and to make him feel himself again. Similarly, a man's weakness may be the undefinable introduction to an attack of typhoid, and can only be made worse by undue quantities or improper kinds of food; or it may be the expression of a latent scrofulosis or tuberculosis. In fine, the true construction of the debility felt by a patient depends on a right appreciation of his diathesis, and of the particular symptoms with which it is associated. So much in correction of the idea of debility as a disease by itself—of debility pure and simple.

Lastly, admitting the duty of the physician, even in acute disease, to consist greatly in maintaining the powers of the patient and in the prescription of convenient food, it must yet be considered as an open question whether we have hit upon the right methods of doing this in prescribing the huge quantities of animal food and stimulant which it is now the fashion to order. It will probably appear that we should consider more the appropriating and digestive power of the patient, and less the cramming of a given quantity of nitrogenous food into his stomach, accompanied with wine or spirit. The habits, the sex, and the constitution of the patient will be more considered. The free prescription of stimulants for women, for the various sensations to which they are subject, will especially be reconsidered. So also will be the prescription of stimulants for men, whose debility is produced by overwork and the worry incidental to our commerce and civilisation. The recent observations of physiologists confirm the doubts which we suggest as to the wisdom of taking the very large quantities of food consumed by people even who do much work, to say nothing of the far larger class who neither work nor suffer in a way to justify much eating and drinking.

THE ACTION OF ALCOHOL IN THE HUMAN BODY.

IN a letter to *The Irish Temperance League Journal*, Dr. A. H. H. M'Murtry, of Belfast, says:—"I had been taught to regard the various compounds sold, not in the apothecary's shop, but in the public-house, as a *sine qua non* in the treatment of all cases of debility and debilitating disease. Like a great many other simple people I believed all I was told, because I thought those who told me ought to know. It never occurred to me to call in common sense to verify and, if necessary, correct the teaching of the schools. Had I done this, I might sooner have adopted the treatment which I have since found so useful, as well as relinquished the treatment which I grieve to think was so often injurious. Well, it did not require college training, but merely my sense of smell to tell me, what chemical analysis has so often demonstrated, that alcohol comes out of the body as it goes into it, which is a pretty suggestive hint that the body wants to have nothing to do with it, but treats it as an intruder, as it treats every other foreign body, and gets rid of it as soon as possible. When real food thus passes through the body unchanged, as it does in certain diseases of the digestive organs, every one admits that the food could not possibly have done the body any good, either as an aliment or a stimulant; but though alcohol always passes thus through the body, a most unaccountable exception is made in its favour, and this wonderful drug gets the credit of both nourishing and strengthening the weakened frame! on the contrary, the body cannot make any use of alcohol, and therefore expels it—expels *it*, the alcohol, not the refuse of its decomposition. Now, why does it do this? The body contains a blood-making machine, which possesses the marvellous property of being able to make blood out of the most heterogeneous substances. The materials introduced into it for this purpose are taken to pieces in a part of the machine called the stomach; the absorbable portions are then taken up by an apparatus of

cells and tubes, and still further changed; and from these they are conveyed into the circulatory organs, undergoing another change in their course thither, which ends in their complete conversion into blood. But not only does the body contain a blood-making machine, the blood is the material out of which nature (whatever *she* may be) makes the body. Nature uses the different ingredients of this fluid for making bone, muscle, nerve, sinew, skin, glands, nails, hairs, and ligaments; and after she has used up all the useful constituents of the blood, that is, of the food originally put into the machine, she throws out the remainder as worthless, and, if retained, actually injurious.

"Now, it did not require college training to teach me this other fact, that nature, when she gets her own way, makes no blunders; and I might be very sure that what she throws away, she cannot use for the building up of the body and keeping all its parts in proper working order, and that the reason she throws it away is just because she cannot so use it. Now she invariably throws alcohol away. If this substance be introduced into the machine over which she presides (an accident, by the way, which can only happen when her foremen knowledge and reason are absent from their posts), she sometimes thrusts it out again forthwith by vomiting; but if it succeed in making its way among the more minute and delicate parts of the mechanism, the whole of the works are for the time disarranged and disturbed, there is disorder and tumultuous excitement (miscalled stimulation and strength) throughout the whole frame, and the different parts move rapidly and laboriously till the obstruction has completely passed through. Thus the intruder is expelled as quickly as possible, and the exquisite "piece of work"—the human body—carries on its various functions as before. But alcohol it goes in, and alcohol it comes out just because nature protests

against having anything whatever to do with it. She has a notice on the front of her premises, that there is 'No admission except on business,' and as alcohol only comes in to upset all her arrangements (which it cannot but do), she thrusts it out as an enemy. So that you see, Mr. Editor, any one who compares the smell of alcohol with the smell of a drunken man's breath, and who chooses to exercise a little reflection, need not go to college to be taught whether alcohol ought to be used as a food or a medicine. He will be able to arrive at the conclusion for himself (and he will find his conclusion confirmed by accurate scientific investigation and such experience as is recorded in the papers already published by you), that alcohol contributes nothing to the nourishment of the body, which is the same as saying that it contributes nothing to the strength of the body, which is the same as saying that it is neither food nor stimulant. What is it then? In a small quantity, it is a deranger of function—a 'disturber of the peaceful movements of the machine; in a large quantity, it brings a part or the whole of the machine to a dead-lock—it kills a part or the whole of the body—it acts as a narcotico-irritant poison. Nature is generally able to cope with her adversary, and the man recovers; sometimes she is unable and the machinery stops—the man dies.

"Such is a homely, but, I believe, a correct description of the action of alcohol in the human body; and it must be plain, that if alcohol alone and unaided can give nature so much trouble, it can give her a great deal more when it has an ally—disease—to assist it. If the strong body of a healthy man be so easily disordered by the presence in it of alcohol, isn't it the plainest common sense to suppose that the weak body of a diseased man will be less able to resist its injurious influence? Could anything more absurd be conceived than to pour this disturbing agent into a frame already at the highest pitch of disturbance from the poison of fever or some other cause, or this narcotiser into a frame already weakened by

disease? Disease is deranged function; deranged function is the result of deranged structure; deranged structure (except when caused by direct mechanical violence) is the result of deranged nutrition; and deranged nutrition is the result of the absence of one or more of the conditions of perfect nutrition, and requires for its removal the presence and co-operation of all these conditions. One of these conditions is the introduction into the body of only such agents as are capable of being in part or entirely converted by the blood-making machine into healthy blood, and then used by nature—or the vital force—for the formation of healthy structure. This being done, healthy function, that is, health, will of necessity follow. But we have seen that alcohol is not such an agent; and, therefore, alcohol can never be useful in the removal of disease. As a healthy man's food or drink, it is unnecessary, useless, injurious; and is much more so as a sick man's medicine. At least, this is what my theorising brings me to, and my practice points in the same direction. I am fully aware of the danger of drawing conclusions from too small a number of facts, and I admit that my practice has not yet been sufficiently extensive to warrant me in basing an opinion upon it alone. But I will say this much, whatever may be its value as an argument in favour of the non-alcoholic treatment of disease, that during the former half of the last three years, I unfortunately lost nearly all my private fever patients, notwithstanding the very free administration of alcohol; and during the latter half, I have, with much more satisfaction and almost invariable success, treated cases of malignant scarlatina, typhoid fever (complicated with bronchitis, and a consumptive constitution), typhus fever, suffocative catarrh, dyspepsia, uterine hæmorrhage, &c., *without any alcohol whatever*. The longer I live, the more I am convinced, that the entire withdrawal of this poison from the list of remedies would be an incalculable boon to poor humanity."

## WHAT AN EDINBURGH DOCTOR THINKS.

At a meeting of the Scottish Temperance League, held at Edinburgh on the 18th of November, Dr. A. Gordon Miller (son of the late Professor Miller) said he had intended to address them from a professional point of view, on the present position of medical science towards the Temperance cause, but the hour was so late that he could only indicate, in a very brief and hasty way, one or two of the points on which he had intended to dwell had there been time. Formerly it was believed that alcohol was a poison, and a poison alone in all circumstances—and that belief was confirmed by certain experiments of three French physiologists, which seemed to prove that alcohol underwent no change in the human system, but was eliminated unchanged from the body. It had been found, however, that these Frenchmen conducted their experiments in a very imperfect manner, and that their conclusions were not to be relied on, being founded on insufficient data. More recent experiments, carefully conducted by Dr. Anstie of London, and some others, had proved that while alcohol was, in many instances, eliminated unchanged, exactly as it was taken into the body, in certain circumstances alcohol was taken into the body, transformed in the tissues, and made use of—in fact acted as a food. The difficulty was, however, to make out what those “certain circumstances” were in which alcohol did not act as a poison. He could only say at present that it was only in certain diseased or unsound conditions of the constitution that alcohol would act as a food. Alcohol, then, was useful only in certain circumstances, when a man was ill. It was, however, by no means useful in all illnesses—it was not, what some old toppers imagined, a perfect panacea for “all the ills that flesh is heir to.” It must be used, even in illness, with discretion; and he would recommend that it should not be used except under the prescription of a medical man. In the case of a reducing fever, they found

that alcohol was not only beneficial, but was absolutely necessary. He would not like to have his hands tied from the use of brandy, more especially in cases of great exhaustion and prostration produced by certain fevers. He might say, generally, that alcohol was only useful in cases of exhaustion and prostration; and it was a difficult and debateable question to decide what were the exact symptoms that called upon a medical man to administer this remedy. It was very difficult, because there were certain cases of exhaustion—more especially trifling exhaustion—where a man recovered much better if he did not take alcohol, but trusted to Nature’s own ways of making up—rest, food, and sleep. Those exceptional circumstances under which alcohol might be administered with advantage were few—much fewer than most people imagined, or were ready to admit; and he thought that they might not only be made fewer, but altogether prevented. There was a great deal in prevention. He thought that men hardly did themselves justice, and hardly did temperance and total abstinence justice, by the way in which they overworked themselves and ran the risk of such prostration as required stimulants. A man was far better not to do the overwork and abstain from the stimulants, than to overwork himself and then try to remove his exhaustion by stimulants. A man may enable himself to do overwork by using stimulants, but he will not only be the worse for the overwork, but also for the stimulants. In that way the stimulant not only really did him no good, but positive harm. He might be asked whether, since stimulants did good in cases of debility, they would not also prevent debility. He would reply that they would not prevent debility. A man only did himself harm by taking stimulants in health; illustrations of this came under the attention of medical men every day. They liked to get a teetotaler to treat; he was always sure to get well, for this reason, that a little

stimulant with him went a great way ; and the vital and digestive powers of the teetotaler were generally good. He had seen some cases, and known of many others, where a moderate drinker, accustomed to wine and spirits, required a vast amount of stimulants to keep the life in him ; whereas, under the very same disease, a teetotaler would pull through with perhaps no stimulant at all, and with certainly very little. The digestive powers of the teetotaler were better, and he would take a little food, and a table-spoonful or even tea-spoonful of brandy would save his life ; whereas, half a bottle, one bottle, or two bottles of brandy might not prevent another man sinking and dying from pure exhaustion. He had intended to make some remarks on the present position of medical men towards the Temperance cause, but he would not detain them much longer. He had often been surprised that medical men who saw so much of the evil of intemperance, were not to be found in greater numbers joining the Temperance movement. The medical journals, however, of late years were beginning to take up the subject of temperance reform, and were advocating the necessity for legislation in regard to the sale of intoxicating liquors ; they had also been urging Government of late to do something in the way of establishing asylums for inebriates. One medical journal, in referring to the cry about the liberty of the subject, asked if the wives and children of the drunkards had no rights as well as the publicans, and maintained that the drunkard was a thief who stole from his wife and children, and argued that it was the duty of the Government to legislate in some such manner as to secure that the wife and children of the drunkard shall receive the benefit of their proper share of his

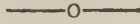
wages. That would be a very difficult matter ; and in this case the old adage was true, "Prevention was better than cure." If they would get the dram-shops closed, there would be no necessity for any law to secure the money of the poor inebriates for their wives and children, for they would prevent the husband from spending his money in the public-house. He trusted that ere long the medical men would become abstainers in greater numbers. Many eminent medical men had been hard workers and nephelists in their day, and were none the worse of their teetotalism, though many people had said that teetotalism was the means of doing harm to those who practised it. He would confidently state that he knew of no such case. He knew of no man who would reasonably take stimulants under a doctor's prescription as a medicine, who was any the worse of refraining from intoxicating liquors when in health, however hard he might work. In fact, he thought the man who refrained would work all the harder for his teetotalism. Many medical men were very moderate indeed in their use of intoxicating liquor, and many advocated for others even a stricter temperance than they themselves practised. Whatever might be the opinion entertained as to alcohol being necessary in certain circumstances, he thought they had higher grounds to go upon in advocating abstinence than that which related to themselves ; they ought to abstain for the sake of others, and to act upon the noble principle, "If meat make my brother to offend I will eat no flesh while the world standeth lest I make my brother to offend." "It is good neither to eat flesh nor to drink wine, nor anything whereby thy brother stumbleth, or is offended, or is made weak."



THE RAILWAY ACCIDENT AT HARROW.—Dr. John Charles Bucknill (Rugby), who was a passenger in the train, desires to impress upon medical men and officials who may hereafter be called upon to relieve suffering

caused by these catastrophes, that man cannot live upon brandy alone, and that a few gallons of soup will go a great way to save life and to relieve misery.—*Lancet*, Dec. 3.

## Notes and Extracts.



**ROUTINE PRESCRIPTIONS.**—The Birmingham correspondent of the *Medical Times and Gazette*, December 17, in referring to the disastrous explosion at a cartridge manufactory in that town, says: "It speaks highly of the staff of the hospital and its organisation, when I tell you that the whole of the fifty-three patients were dressed, bedded, and supplied with brandy and opium within one hour after admission!" Are we to infer from this remark that it is the practice at the Birmingham Hospital to administer brandy and opium in all cases of accident without exception? If so, the energy manifested by the medical officers was secured at too great a cost. A careful discrimination would probably have shown that some of the cases would have done better without stimulants than with them.

**SULPHUROUS ACID AND ALCOHOL.**—The value of sulphurous acid gas as a disinfectant has been established by many and crucial experiments, and is generally admitted. This agent is specially recommended by medical officers of health. There is a want of convenient methods of applying it, and especially of applying it in a limited space and to a definite and measured degree. Mr. John Gamgee has called attention to the convenience of employing it as disengaged from an alcoholic solution. Cold alcohol will, he states, take up three hundred times its bulk of sulphurous acid gas; and where, for example, it is desired to saturate a box of clothing with this gas, it is sufficient to drop a certain quantity of its saturated solution of alcohol into the floor of the box, and a large definite quantity is set free by the evaporation. The suggestion is one of importance, and seems to us worthy of attention. The solution of sulphurous acid in alcohol could easily, and probably with advantage, become a general article of pharmaceutical commerce for medical and sanitary use.—*British Medical Journal*.

**MORTALITY AMONGST TAILORS.**—On Wednesday afternoon Dr. Lankester held an inquiry at the Globe Hotel, Hatton Garden, into the circumstances attending the death of James Turner, aged 79, a tailor, who was taken suddenly ill on Sunday night, and died before medical assistance was at hand from effusion of serum on the brain, and a verdict to which effect was returned by the jury, six of whom, curiously enough, were Jews. Dr. Lankester observed, in the course of the inquiry, that the deceased no doubt lived to his great age—having regard to his sedentary habits—in consequence of his abstinence from intoxicating fluids. Very few tailors lived very long, because it was well known that, as a rule, they were given to drinking to excess, and never had an opportunity of taking enough exercise to work off its effects. He believed that nearly every person (himself included) had more of spirituous liquors than was good for them, and it would perhaps be very much better if they were not taken at all. He also said that in 98 per cent. of the inquests he held upon tailors death resulted from drinking habits, and the inquests were all held upon the bodies of comparatively young men.—*Lloyd's News*, Dec. 18.

**ON THE USE OF HOT MILK AS A REMEDY FOR DIARRHŒA.**—A medical correspondent of the *Lancet* says:—"Hot milk as a remedy for diarrhœa has been very successfully tried in Bengal, some of the particulars concerning which are given in the following extract from a letter from a resident:—'Hot milk is a specific for diarrhœa. A pint every four hours will check the most violent diarrhœa, stomach-ache, incipient cholera, or dysentery. In fact, so much should rarely be given, as it causes subsequent constipation. Half a pint every meal generally reduces gradually and pleasantly any ordinary diarrhœa. If

you have stomach-ache, a pint of hot milk usually cures it in ten minutes (*i.e.* if the stomach-ache is accompanied by diarrhœa). It is perfectly soothing to the whole alimentary canal. It has never failed in curing me in six or twelve hours, and I have tried it, I should think, fifty times. I have also given it to a dying man who had been subject to dysentery eight months, latterly accompanied by one continued diarrhœa, and it acted on him like a charm. In two days his diarrhœa was gone, in three weeks he became a hale fat man, and now nothing that may hereafter occur will ever shake his faith in hot milk.' I have tried it in one case, and it had precisely the effect described, one half pint being sufficient to cure the complaint, although subsequently cold milk was taken to allay the remains of the griping pains, which it appeared to effect. It may deserve inquiry whether the milk should be boiled, and allowed to become sufficiently cool to swallow, or whether it should be only made quite warm. In another part of his letter he observes that he always takes 'warm milk' in preference to chlorodyne, from which it would appear that it is not usually boiled."

RELAPSING FEVER IN LIVERPOOL.—Dr. Robert Gee, physician to the Liverpool Fever Hospital, has recently furnished a series of notes on Relapsing Fever to the *British Medical Journal*. In one of these papers, published on the 17th of December, Dr. Gee shows that not more than 12 per cent. of the cases admitted to the hospital could be attributed to poverty, and he adds, "That overcrowding, the faulty construction of courts and dwellings, drunkenness, and filthy habits (bad drainage or insufficient supply of water cannot be added to the list), as the recognised causes of fever, have been, and are, in operation here to an almost unequalled extent, is not to be denied; and it would be difficult to decide which enjoys the pre-eminence as an epidemic producing agency. Separately, each would play an important part in the deterioration of our labouring population, but on their united action their

baneful consequences are incalculable. One result is the production of a race impaired in mind, morals, and physical constitution, possessing organisations so enfeebled and susceptible that a noxious germ deposited therein finds a soil prepared for its reception admirably suited for its development and propagation." Of the manner in which drinking contributes to this terrible result, Dr. Gee says, "*Drunkenness* must be added to the list of depressing agencies rife in Liverpool. The practice of dram-drinking is prompted, to a great extent, by the unhealthy state of the atmosphere which many are compelled to breathe, and, when once established, leads inevitably to drunkenness, followed by poverty and its long train of disastrous results. These act and re-act on each other until the individual is degraded to the lowest possible condition. Drunkenness gives rise to poverty and filthy habits, and necessitates a residence in unhealthy, overcrowded, dark nooks; while these, on the other hand, engender a craving for stimulants which, under the circumstances, cannot be withstood."

INTEMPERANCE IN THE TROPICS.—The Surgeon of H.M.S. *Basilisk*, in his Medical Report for 1868, makes the following pertinent observations on the effects of indulgence in alcoholic liquor, *apropos* of a case of fatal apoplexy:—"Observation has forced me to conclude that the climate of China (especially of South China), having a very depressing influence, is peculiarly apt to induce in those who long reside there a habit of indulgence in alcoholic potations, which is often quite foreign to the natural tendencies; and, in this respect, a residence in China is even more prejudicial to health than a sojourn either on the West Coast of Africa or in the West Indies, inasmuch as the first presents facilities to gratify the acquired tastes which do not exist in either of the latter. Few, indeed, but those possessed of a very strong will, can resist the temptation to assuage their thirst with beverages rendered grateful by the addition to them of alcohol in some form, which is generally supposed by the European

residents to afford the best security against those diseases (fevers, cholera, diarrhœa, dysentery, &c.), which they attribute, not without some show of reason, to the consumption of the water of the country, saturated as it is with decomposing organic matters. Indulgence in drinking habits is particularly hurtful in China, as in other countries similarly situated, during the hot season, when thirst is most oppressive and exacting, especially to those recently arrived from more temperate regions, because at that period the necessity for generating animal heat decreases *pari passu* with the increase of atmospheric temperature; hence the alcoholic poison imbibed is more slowly eliminated in summer than in winter, and by its presence exercises a pernicious influence on the system, already oppressed and overburdened with effete matter, by retarding the retrograde metamorphosis of the tissues and the elimination of the waste material through the great emunctories of the body; thus rendering imbibers peculiarly prone to many diseases, especially those affecting the nervous, hepatic, and circulatory systems, from which the temperate frequently escape.”—*Lancet*, Dec. 3.

**TREATMENT OF DELIRIUM TREMENS.**—Dr. Charles Murchison, F.R.S., in a lecture delivered at the Middlesex Hospital (*Lancet*, Oct. 29) says:—“It has been contended that delirium tremens is almost invariably the result of abstaining from stimulants by a person who has been previously intemperate, and that the best way of inducing sleep is to administer brandy and other alcoholic stimulants in frequently repeated doses. According to my experience this doctrine is founded on error, and the practice is most pernicious. You will have noticed that all our patients had been drinking hard up to the commencement of the symptoms, and this I believe to be the rule. Give alcohol, and you only add fuel to the fire, and keep up congestion of the stomach, liver, and kidneys. Medical men, in my opinion, dread too much the consequences of withdrawing alcohol in the treatment of delirium tremens.

I have long been in the practice of giving none, except in cases where there has been evidence of fatty heart, or an intermitting pulse, or there has been some complication calling for its use. The patient no doubt often experiences considerable distress, but I have never seen any bad consequence from suddenly cutting off the large supply of alcohol in which he has been indulging before the attack. This result of my former experience has been borne out by the cases which have been under your observation. In all cases it is well that the patient should have as much nutritious food as he can digest. Some authorities contend that all that is necessary to induce sleep is to give strong beef-tea and other nutriment of a like nature. This, and abstaining from stimulants, will no doubt suffice to effect a cure in mild cases; but that sleep will follow this in severe cases is quite opposed to my experience, while in not a few bad cases there is congestion of the stomach and liver, and food of all kinds is rejected. It is necessary, therefore, to be provided with other means for inducing sleep.”—Opium, digitalis, bromide of potassium, and hydrate of chloral, are the drugs recommended by Dr. Murchison to induce sleep.

**HOMŒOPATHY AND BRANDY PRACTICE.**—The *Monthly Homœopathic Review* for December contains a letter from Dr. James Edmunds respecting a recent discussion at the Dialectical Society, in which he says:—“I quite admit that bleeding, drugging and starving patients is homicidal, and that patients treated upon such principles recovered, *when they did so*, in spite of the doctor, while the deaths were, in large proportion, due not to the disease but to the treatment. I am equally convinced that the modern system of gorging patients with food which they cannot digest, and poisoning them with alcohol which they do not need, is as destructive as the other extreme of practice which was adopted by the last generation of doctors. And here I would ask, why do not the homœopaths stick to their

principles, and, when they prescribe brandy for its medicinal effect, prescribe it in infinitesimal doses? Some time since I was called to a consultation, and on arriving at the house I learnt that the gentleman in attendance was a homœopath, who had been administering infinitesimal doses of the medicines with which he provided the patient, but that he had directed another medicine (brandy) to be taken three or four times a day, in tablespoonfuls! It was my opinion that the lady needed no medicine of any kind, and therefore I told her that she could not do better than to stick to infinitesimal doses; and I added, that if only she would take her brandy upon the same principle, it would greatly hasten her recovery. I trust that the gentleman in attendance seconded that suggestion, as, although there is endless allegation to the effect that infinitesimal doses of some medicines produce very powerful effects, I am not aware of any allegations to the effect that an infinitesimal dose of alcohol produces intoxication. Will the homœopathic physicians aid those of us who are now trying to stem the tide of medical drunkenness which has of late overrun the country? The old system of bleeding and drugging finished the patients off promptly, or soon disgusted those who were not killed; but the modern 'brandy practice' leaves those who recover in a state of moral gangrene which festers in open day, and continues to corrupt society at large."

**ALCOHOL IN RELATION TO SURGICAL ART.**—At the opening meeting of the session of the Medical Society of London, Oct. 17, the President, Mr. Gay, devoted some time to the consideration of those acquired states of the constitution which affect the tolerance of wounds and other injuries, favourably or otherwise; and referred at length to the influences of long exposure to vitiated air, of unwholesome and inadequate food, depraved habits, depressing passions, and other mental emotions. Of these, the habits of the drunkard and debauchee were by far most detrimental to the issues of surgical art. No skill

could prevail against a nutmeg liver, or a permanently corrupted kidney. The experiments of Parkes and Wollowicz, reported in the Transactions of the Royal Society, as well as others by Dr. Richardson, have incontestably proved that the continued use of alcoholic stimulants leads directly to disease of the blood-vessels and to intermittent heart's action. The habit of taking stimulants "under advice," as though they were akin in their effects on the constitution to those of the *vis medicatrix*, is becoming a "fashion" in the higher and middle classes of society; so that the champagne, the port-wine, and the brandy bottles are beginning to be as much an habitual resort under temporary ennui or languor, whether from indolence, dissipation, or indisposition, as is the gin-flask to the depraved pauper under the burthens of remorse and despair. In this way surgical art has been robbed of its just successes; and if the profession does not seriously intervene to check an evil which has had its origin in the profession, it will, it is to be feared, be chargeable hereafter for a larger share of its failures than it would like to acknowledge. The same false view of the value of these stimulants, and of strong nitrogenous beverages as well, has led to another mischievous practice, one that is eminently unfavourable to the success of surgical art—viz. that of urging a patient labouring under the effects of longstanding chronic disease, and especially in the prospect of a severe operation, to swallow as much brandy, port-wine, and beef-tea as can be got into him. The condition resulting from this practice, indicated by a black, dry, almost typhoid tongue, a brickdust, sallow face, a feeble, and often intermittent heart, and an incessant drain from the bowels; vainly attempted to be checked by quarts of chalk mixture, is most unfavourable for the performance of severe operations. The exact reverse is that state which leaves the resources of nature most free to act beneficently in times of her greatest need, and should always on such occasions, if possible, be secured.

THE  
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April, 1871.

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Original Contributions.

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INTEMPERANCE AND SANITARY REFORM.

THE chair of the Health Section of the Social Science Association, the annual congress of which was held last year at Newcastle-upon-Tyne, was occupied by Mr. Robert Rawlinson, C.B. There is no gentleman in the Association, or perhaps out of it, who can speak with greater authority, or from a more enlarged experience upon subjects relating to the public health. He was one of the pioneers of sanitary reform, when a general apathy and ignorance prevailed, and he has since that time held several positions of great trust and responsibility, among which was that of an appointment as Commissioner under the Poor-Law Board to organise plans of relief during the Cotton Famine in Lancashire. The success of his efforts to meet that emergency by the establishment of public works is well known, and those efforts were not only attended for the time being with great benefit to the suffering people, but they conveyed many useful lessons to others engaged in various administrative departments. Mr. Rawlinson's address at Newcastle, which is given at length in the Report of the proceedings of the Association, is a rapid review of the progress of Sanitary Science, up to the present time, and a sketch of its present state, as seen from his own point of observation, which is the same as that taken by the body of Sanitarians he represents. While approving of much that he has set forth in his address, we regard it on the whole as very incomplete, and we embrace the opportunity of showing in what that incompleteness consists. Besides this, he has given indirect encouragement, if he has not actually inculcated, a fallacy that we are sure on mature reflection he will be the first to repudiate and condemn. The great bulk of sanitary reformers,

intent upon a beneficent work, have neglected the surroundings of the question, and while seeking to improve the homes of the people, have overlooked the influence of the general habits; or rather have attributed the origin and growth of indolent and vicious habits to bad sanitary arrangements, when the results are due to many causes, some of them much more powerful than a defective sanitary condition. There is a stage of earnestness closely bordering upon fanaticism, and that is reached when an advocate of Sanitary Reform instructs us to expect from improved dwellings, better drainage, and abundant water supplies, a healthy, thriving, and moral population. That these works will tend to the desired result, that they are indispensable as aids to other beneficent agencies, no one will deny; but those who exclusively rely upon them will assuredly be disappointed, as all men are, who in treatment confound the symptoms of a disease with the disease itself. A correct diagnosis is not less necessary in applying remedies to our social maladies, than it is in directing the physician to deal properly with his patient. We propose to discuss this subject pretty freely, as we conceive that much excellent counsel and self-denying labour are wasted, from being partly or wholly misdirected and misapplied.

We will first take from the address a brief description of things as they exist. Mr. Rawlinson says:—

“Defective house accommodation produces disease, immorality, pauperism, and crime, from generation to generation, until vice has become a second nature, and morality, virtue, truth, and honesty are, to human beings so debased, mere names. The money expended in relieving pauperism, in detecting and punishing crime, and in supporting the sick, if properly expended, would provide sufficient funds to furnish house accommodation. Taking floor areas and cubic spaces into account, and the money expended within such spaces, it will be found that wretched dens of misery and vice are more costly to the community than any equal area and cubic space in a palace. There are tenements by hundreds of thousands which generate sickness, pauperism, and crime, the cost of which is paid for out of the rates, and yet such property is not worth more than from three to five years’ purchase, but the round of degradation is allowed to go on.—Zymotic diseases cut down the head of a family. Typhus removes a father in the prime of life, and the family is then left to the care of the parish. ‘Once a pauper always a pauper,’ has become a proverb. Statesmen have therefore this lesson to learn—namely, that that which is necessary to the well-being of society, and which individuals cannot provide, but which States can provide, must be the bounden duty of the State to furnish. No excuse can be valid.”

We could, without much difficulty or trouble of research, find very many parallel passages in the works and speeches of men whom Mr. Rawlinson is proud to acknowledge as colleagues. The description is unfortunately not overcharged, nor the estimated cost of all this vice and misery set down at more than its full value. We cannot, however, accept the other part of this

statement. We have first to inquire who are those individuals who cannot provide the necessities of existence in the shape of shelter and house accommodation; and when they are found, we have then to ask how they have become deprived of the means to satisfy the most ordinary wants of civilised beings; whether it is by their own act, or by the acts of society; and then a further question suggests itself, whether the State, stepping in to make provision for the destitute, is a likely means to rescue them from that condition. If the necessities of the case are pleaded, why then an hour's ramble in the East End of London will show, to any careful observer, hundreds of men, women, and children, without decent raiment. It may be assumed that they have not the means to provide it. Is it the duty of the State to step in and clothe these half-naked people? What has the State effected by its poor-law, which is based upon the principle laid down by the Sanitarians? The State has made provision to meet extreme cases of poverty without any relation to the producing causes of that poverty, and the result is widespread demoralisation. It attracts the idle and the vicious, and those who avail themselves of the relief are very soon rendered unfit for the pursuit of any useful occupation. They become, in its worst and bitterest sense, dependent. The loudest and the most emphatic reproach to this vicious system is that which is quoted above, "once a pauper, always a pauper." With this pregnant example before us of what the State has accomplished, in its attempts to provide for those who, it is alleged, are not able to provide for themselves, ought we not to pause before we ask for any further interference in such a direction? The State has a duty, that of prevention, and we shall suggest in what way it may be exercised as we proceed with our argument. It is no part of the business of the State to provide homes for the people. Mr. Rawlinson in another passage says:—

"We now want a report or treatise of an exact and statistical character, setting forth with clearness and precision the financial, sanitary, and moral results of the more important industrial dwelling undertakings in this country of the last fifteen years. Financial, in order to bring to a practical test of profit and loss expenditure undertaken in different parts of the country under ordinary or peculiar conditions. Sanitary, in order to show that improved house accommodation means less sickness, less mortality, healthier children, and higher wage-earning power. Moral, in order to show that better dwellings mean sober habits, accumulated savings, and an almost total absence of offences against the law."

In the above passage there is a plain recognition of the fallacy to which we have referred. Is it seriously meant that if the zealous sanitary reformer could have his own way, if he could supersede all the dwellings unfit for human habitations by salubrious and comfortable houses, that he would thereby banish

insobriety, and that crime would become absent, or nearly so? If such an expectation is held out, it is time that the grounds upon which it is rested should be seriously examined. To our apprehension the statement conceals a mischievous error, as it leads the mind away to a proximate cause of vice and misery, that cause being only the effect of more deep-seated causes underlying our social system. This fallacy appears in various shapes and disguises. Sometimes we are told that education is the remedy for intemperance, and then, again, that it is to be found in sanitary reform. We are wearied and pained at the reiteration of opinions which are opposed to the teachings of experience, and indicate on the part of those who utter them a want of knowledge as to the actual condition of our population. The mind is led away from the field of sober fact to one of loose speculation. Is it philosophical to expect that any measures to elevate our population can be effectually applied so long as the facilities for drinking alcoholic liquors remain such as they now are, or that we can hope for any general or permanent improvement so long as the delusion obtains that alcohol is good as an article of diet or as a beverage? In our judgment it is just as impossible to bring about a state of general sobriety while intoxicating drinks remain as common beverages, as it is in an individual case to reconcile a state of robust health with habits of intemperance. We therefore demur to the postulate that better dwellings mean a sober people. The better dwellings depend upon a general improvement in habits, an improvement which will have to be brought about by a number of remedial agencies working together—the Temperance reformation being one, and not the least important. If this be so, the earlier we learn the truth the better.

It would be folly to assert that there are not in the communities where drinking prevails, some conditions more favourable to intemperance than others, and among the most favourable are those depicted with such force by Mr. Rawlinson. In another part of our journal we quote from the *Lancet* of December 24 a description of a state of things existing in Liverpool that is a disgrace to our civilisation. The physical state of our population has been too much neglected, but in looking at it more closely we must not neglect the moral causes which act and react upon the physical. The physical causes of intemperance have been perhaps too much overlooked by the temperance reformer, and he has somewhat unreasonably expected that his persuasion and warnings would have full effect upon men whose better inclinations have to contend with the habits of years, with an appetite that has grown up from boyhood, and whose will is impaired. But the sanitary reformer is under a much greater mistake to

suppose that such habits and inclinations are to be overcome by any other means than the abandonment of the drink, and by a corrected public opinion on the drinking system. Better dwellings will weaken the attractions of the public-house, but will not conquer them—for whatever the home or associations of the young workman may be, there is danger so long as he welcomes the drink as a friend, or as a consoler, or as a source of enjoyment. Now the whole error lies in this, that our publicists and statesmen look upon the drink as a good thing in itself, and are always seeking out ulterior reasons why men drink to excess. They will not see that such a result, in the majority of cases, is inevitable from the nature and properties of the drink. There are, of course, many who, whatever may be their mode of life, their pursuits, their privations or unhappiness, never fall into habits of insobriety, and whatever vices they may indulge in, drinking will not be one of them; but there are others who, with all the advantages that the most favoured possess, namely, those of home culture, education, and a prosperous career, run gradually from what is termed moderation to excess, or, under some unexpected turn of good or bad fortune, fall suddenly into habits of inebriety, and with such men the habits become the more inveterate, and the appetite the more unconquerable. At the moment, probably, which they have regarded as that of their greatest strength, their good angel has departed. No one is secure who takes the drink, and of none who take it can it be predicated what the end may be. Is it not wise, then, to inquire whether the evil is not in the drink? When we arrive at distinct conclusions on this head, and trace the effects of our drinking system, generation after generation, upon our population, we shall be better able to estimate what education and sanitary reforms are calculated to effect. The truth is, that drinking alcoholic drinks is a violation of a great natural law, as much so as breathing an infected atmosphere, and if the law is not obeyed the punishment will inevitably follow. It would be as reasonable to expect a suspension of the law of gravitation, as to expect that intemperance will cease to exist where strong drinks continue in common use. By various appliances we may doubtless diminish the greater evils of intemperance, but the remedy must be sought in learning, and then yielding a docile obedience to, those simple and intelligible laws, which are written upon the constitution of man as plainly as light is written upon the sunbeams. These laws teach him that alcohol is a poison to the man in health, and it may be doubted whether so many are slain by intemperance as by temperate indulgence, using those terms in their generally accepted sense.

We have said that the physical causes of intemperance have

been much neglected, and no doubt a large amount of evil has arisen from this neglect. Every medical man knows that many diseases are superinduced, and others aggravated, by the regular, and what is termed the moderate, use of alcoholic drinks. Dr. Grindrod, in discussing the physical causes of intemperance, adduces physical exhaustion induced by various means: "vicissitudes of weather or climate, unnatural exertion of the animal system, and excessive labour," he names among others; "and another variety of physical exhaustion," he says, "is produced by confinement in an impure or badly ventilated atmosphere." Again he says:—

"Languid circulation of the blood, accompanied with imperfect operation of its functions, are the consequences of confinement in a stagnant and polluted atmosphere. The corporeal depression which necessarily ensues is too often sought to be removed by the use of intoxicating liquors."

This passage, as important as any in the valuable book from which it is extracted, will direct our attention to many of the prevailing causes of intemperance. For example—a young lady confined to a close sitting-room, eating food of an innutritious and heating quality, taking little exercise, and living in violation of the laws of health, feels a continual craving, and as a glass of wine allays the sensation for a time, she continues the indulgence until the use becomes a settled habit; and then the very symptoms which have been mainly produced by the wine are urged as reasons why the wine is necessary for her constitution. The tradesman, again, sleeping in a confined and badly-ventilated bedroom, under a mountain of bedclothes, eating before he goes to business a solid breakfast, and then hastening to a heated counting-house, devotes several hours to the cares of business, and then hurries home to dinner. No wonder that he should complain of indigestion; wine is sought as a relief. The wine drinking becomes a habit, a morbid appetite is created, and the seeds of gout are sown, and a debilitated old age, or premature death, ensues. This appetite for stimulants in the first place arises from an enfeebled or disturbed action of the bodily functions. On the same principle the tenants of the wretched hovels described are the victims of debility from various causes, and this induces an appetite continually crying Give, Give, and under its cravings they rush to stimulants. Dr. Southwood Smith says:—

"The poison generated in these neglected districts, and to which these poor persons are habitually exposed, is a sedative poison, among the most distinctive characters of which are the depressing effects produced by it, both on mind and body. This is one of the main causes, not only of the mental apathy of which I have already spoken, but also of that physical listlessness which makes them incapable of any great exertion. I am satisfied that this feeling of depression is one of their chief inducements to the use of stimulants, which the same feeling naturally leads them to take in excess, whenever a sufficient quantity

can be procured. I quite believe, from what I have observed of them, that the inducements to take the most pernicious amount of stimulants arise from a sensation of languor, the direct result of the debilitating causes that are incessantly acting upon them, and that renders them so incapable of physical or mental exertion."

Dr. W. A. Guy, F.R.S., in the same work, "The Report of the Sanitary Commission, 1844," says:—

"Both the mind and body are injured: the one is in a state to be excited by slight causes, and the other to require, or seem to require, the aid of intoxicating liquors." "I believe that the unwholesome state of places of work, by the depressing effect it produces, is a great cause of intemperance."

Mr. Toynbee, surgeon, said:—

"I find that the great majority of my patients confess, upon inquiry, that they are led to indulge in malt and spirituous liquors to relieve the extreme physical and mental depression produced during their occupations; and I have no hesitation in ascribing the diseases of a gouty character, which are extremely numerous and variable, to the indulgence in spirituous and fermented liquors."

It would be wearisome to multiply examples of this kind of teaching by men who have rendered great service to humanity. They taught in a powerful and emphatic manner that epidemics, and a large class of common diseases, were produced by preventible causes, and they taught this truth at a time when such lessons were much needed. They failed to observe that in what they term the use of alcoholic liquors there was a tendency to run into the excess which was found by them to prevail; and, no doubt, they believed that intemperance might be rendered extremely rare, if not entirely banished, by the measures they so strenuously advocated. This may be conceded, that the vice of drinking has been greatly stimulated by the causes pointed out. Dr. Guy, in his evidence, showed, and this bears strongly on the case, that the mortality was greatly increased among those engaged in occupations most liable to the seductions of drinking, and it requires no argument to show that the tenant of a comfortable home, all other things being equal, would be less likely to spend his evenings at the public-house, than he who had a hovel to live and sleep in. The error is in taking a part as representing the whole case—in not making the inquiry how it happened that so many occupied the hovel who had the means to live in a proper home—and how it came about that there was such a scarcity of comfortable dwellings. One thing is clear, that the love of intoxicants, from whatever cause it had been produced, had become so much a passion with a large mass of the population, that everything else was sacrificed to it. They were fastened to their wretched homes by habits that are stronger than bonds of iron, and they had lost all power of effort, or even desire, to free themselves. When it was seen that the indulgence in strong drinks

hurried so many victims into an injurious and fatal excess, it might have been presumed that an inquiry would have followed as to the properties of strong drinks. It was known to medical men that no disease is so difficult of treatment as the confirmed appetite for drink. If there is something so tempting in the excitement produced by drink to those living under unfavourable circumstances, and the circumstances tended to make the temptation irresistible, is not the inference a fair one that there is something wrong in the drink? It is, of course, highly important to alter or modify all those conditions which lead men and women to indulgence in drink, but it is equally important to teach them the dangerous properties of the drink which aggravates the evils for which a temporary relief is sought.

We find, however, throughout the whole of the sanitary reports, although much is said about intemperance, no question raised as to the properties of the drink. The lesson is persistently enforced that the people drink to excess, because of the low sanitary condition. The question does not seem at any time to occur as to the propriety of placing the drink out of reach; but it is taught that, by giving the people better dwellings, the attractions of the public-house are to be overcome, and intemperance is to gradually disappear. This is not confounding the relations of cause and effect, but actually inverting them. Large masses of the population are living in habitations unfit for human beings, but how much has strong drink done to place them there—and does it not effectually close the door of escape?

We are not insensible to the value of the home—it is the basis of our civilisation; but we may further inquire how far the sanitary reformers are right in ascribing to the defects in this particular so much of sickness, vice, and immorality. There has been in this, as in every other field of social improvement, much ignorance and neglect, the consequences of which it will be a work of time to remove, and the steps will of necessity be slow and progressive. Starting from any given period in our history, it will admit of fair question whether the domestic life of the people has not kept pace with the general advancement, and the reasons why the advance has not been greater are seen upon the surface. There are great numbers whom modern improvements and refinements have not reached, but it is clear to any ordinary understanding how it is that they have been left behind. There has grown up a love of drinking, and in this drinking there has been an ascertained and widespread increase. The example of the educated classes, the acts of legislation, as well as the aggregation of populations in large centres, have all tended to increase the customs connected with drinking. This has had its effect in keeping back wholesome reforms, and in checking progress. The people have

not had to inhabit wretched homes because they had not the means to procure better, nor is it credible that skill and capital would not have sought profitable employment in building if there had been a demand for better dwellings. Why should dwellings be removed from the market of supply and demand? The great obstruction has been this: that the public-houses, which have been licensed without stint, have absorbed the means of the thoughtless and thriftless, those means the frugal and sober expend upon the comforts of home, and thus the majority of the people have preferred the sensual enjoyment of the drink to the rational pleasures of home. If we are asked to point out the primary cause of this bad sanitary condition, we unhesitatingly say, the drinking habits. We demur to the teaching that better dwellings mean sober habits, and insist that it is the habits we have to reform. Are there no homes in this country, abounding in all the comforts of life, where drunkenness is found? Are there none where indulgence, that the outside world knows nothing of and does not suspect, is destroying the peace and hanging like a nightmare over the hopes of a family? Look at what society presents. In thousands of cases there are scantily paid artisans, who earn on the average less than the best paid mechanics spend in drink, who have a clean and comfortable home; they expend upon it what the mechanic spends in drink. Are we to be told that better dwellings are to bring back the drinker to his fireside, or that they will keep those brought up in them from wandering from it? Experience teaches a wholly different lesson; and teaches us that if we subdue the drinking, the people have the means, the ability, and the energy to provide dwellings for themselves. Whatever may be done to help the people, those with confirmed habits will prefer the indulgence that has reduced them to the hovel. Since the sanitary inquiries which immediately followed the enactment of the new poor law, temperance societies have spread their doctrines far and wide, and with the best results. They have found that it is not easy to convert a whole people, but they have left everywhere traces behind them of a good and noble work, and they have gone on boldly teaching the lesson of self-help. In every town and village in the kingdom, instances may be found where the dirty dilapidated hovel has been exchanged for the clean, tidy and cheerful cottage; and this has been effected by no greater sacrifice than that of giving up the beer. We are not accustomed to associate great comforts with the dwellings of the poorer classes in Ireland, but we were witnesses of what had been accomplished by Father Matthew's labours. We prefer, however, to quote the testimony of others. Mr. Robert Charleton, of Bristol, visited that country, and he says:—

“One of the most striking results is the improved aspect of the habitations of the poor. We visited many in the most inferior portions of the city of

Limerick, and found scarcely a cabin destitute of a clean and comfortable bed, and not only many of them supplied with the requisite articles of furniture, but with a good stock of earthenware, which, arranged on the shelves in regular rows, gives an air of great neatness and comfort. The children healthy and clean, and in general fairly clad, few exhibiting that ragged appearance formerly so general among this class."

Mr. John Cadbury, who visited Ireland at the same time, says:—

"I was much pleased in a visit I paid to an extremely poor district on the first day of the week, to find the children generally clean, washed, and neatly dressed, and the adult portion of the people dressed in suits of good broad-cloth. They often pointed to their bed, to a table, to a few chairs, and decent clothes as the fruits of abstinence from whiskey."

It was not in these cases, nor in many thousands of others which might be cited, the better dwellings that made the sober people, but the sober people that made the better dwellings. In relation to Liverpool the *Lancet* says:—"Dr. Trench wisely recognises the fact that good habits will overcome all difficulties and mitigate all structural defects." These individual cases illustrate a great principle, and show us in what measures to seek for aid. No Government can do for a people what the people can do for themselves. The duty of the State is to remove impediments out of the way, and every step it takes beyond that generally leads to, or ends in, mischief.

In the last Report of Dr. Lankester this view is strongly supported:—

"I would especially call attention to the fact that the vice of drunkenness is not confined to the poor, and that its victims are to be found among the rich and well-to-do, as well as amongst the poor. Nor do the inquiries in the coroner's court at all lead to the conclusion that its cause is poverty. That it is more frequently found connected with poverty arises from the fact that those who indulge in it become lazy and unfit for the duties of life, and where they have to work for a living must necessarily become poor. Nor is the vice confined to men, as is frequently supposed. In my last report I showed that seventeen cases were those of men, whilst there were fourteen of women. In the present table it will be seen that there are twenty-five cases of men and eighteen of women."

We have kept in view that this is a question of the public health, and as such closely allied to the national well-being. Sickness and disease are heavy penalties to pay for sins of neglect; but we must use great discrimination in the application of our remedies. The drinking of which we complain is not a vice of yesterday, but has grown up with our growth, and has affected all classes of the population. Would it not have been more appropriate if Mr. Rawlinson had put drinking as the cause of that vice which he asserts, and most truly, has become a second nature? If virtue, truth, and honesty, are mere names, we owe it more to the delusion as to the properties of strong drinks, a delusion shared by all ranks and orders of men, than to any other cause. This delusion costs us about one hundred millions per annum as the direct purchase money of strong liquors, and the cost in other ways is

incalculable. The effect of this, generation after generation, upon parents giving to their children the sad inheritance of enfeebled bodies and weak brains, cannot be put down in figures of arithmetic. We have among us a decrepit and an attenuated population, such as might make the observer doubt whether they belonged to the same species as the more noble and dignified of the race. The bystander at any ginshop in a populous neighbourhood may see them passing in and out in every stage of degeneration, from the youth, or young wife beginning the sad career of drinking, down to the tottering man and woman, comparatively young in years, but prematurely aged and utterly powerless to resist the temptation that has lured them to decay and ruin, when they can procure the drink. Trace these wrecks of humanity to what in mockery is called their homes, and there can be no misapprehension as to the cause of this misery and desolation. It is not the wretched home that has driven them to the ginshop, but the ginshop that has destroyed the love and reverence for home, and has blighted the home itself. Banish the drink, and the holy affections it has undermined and destroyed will gradually reappear.

This, we are aware, will be considered a bold denial of what is an accepted truth in high quarters ; but it would be a dereliction of duty to hesitate in the avowal. The consequences of this vice of drinking are written upon the character of our population, and it is in vain to look to education, or to sanitary reform, to stop their inroads. We must stop the drinking. In relation to Sweden, Dr. Magnus Huss said :—

“ Things are come to such a point, that if some energetic means are not adopted against so fatal a custom, the Swedish nation is menaced with incalculable evil. The danger is not future and contingent, it is a *present* evil, the ravages of which may be studied in the present generation. No measures can be too strong ; it is better to save at any price, than have to say, ‘ It is too late.’ ”

This forcibly applies to our own condition in this country. All the inducements to intemperance, and which we recognise under the general description of living too fast, are on the increase ; and although drinking may be more decorous, it is not less insidious and dangerous. Of late years there has been an increase of what is known in the faculty as “ chronic alcoholism.” It poisons the blood, but it does not end there, but contaminates the blood of the offspring. Dr. John Reid, in his work on Hypochondriasis, says :—

“ If the infant of an intemperate mother so far escape as to be ushered alive into the world, little physical vigour or intellectual health can be expected from a human being whose constitution has been made to know the influence of alcohol, before it was even exposed to that of air.”

Dr. Browne, in his work on Hereditary Insanity, says :—

“ The drunkard injures and enfeebles his own nervous system, and entails disease upon his family. This heritage may be the result of a ruined and

diseased constitution, in which pleasure was sought in the alternate exaltation of sentiment and oblivion, which exhausted the mental powers, and ultimately produced imbecility and paralysis, both attributable to disease of the substance of the brain. At present I have two patients who appear to inherit a tendency to unhealthy action of the brain from mothers addicted to drinking, and another an idiot whose father was a drunkard."

This evil is going on in our midst, sapping the strength of the people and laying heavy burdens upon the industrious. The means by which it can be arrested are suggested by the evil. No palliative measures can avail, but they may render the disease more malignant by leading the inquirer away from its originating cause. If alcoholic drinks be the source of so much evil, then is it not wise to look them fairly in the face and abjure them? It is not simply a question of philanthropy—it is one of science and legislation; and those who offer panaceas for our social maladies are called upon, by every claim of truth and justice, to demonstrate to us that alcohol is not an evil thing—that there is a temperate use as distinct from intemperate abuse, and that the general use is compatible with general sobriety. Unless they can do this, they make no answer to the allegation we prefer against it, and do little to establish their own demand upon public attention.

We part from Mr. Rawlinson with feelings of the greatest respect, due to him for his unwearied exertions in the work to which he has devoted his life. It is because we value these labours that we protest thus earnestly against what we conceive to be a serious error, all the more dangerous when uttered by a man of high position and solid acquirements. We desire nothing better than that he should devote his attention to the subject as we have placed it before him, and we have not only a strong hope, but a perfect confidence, that he will admit that the first object to seek in all our social ameliorations is the suppression of drinking. Sanitary reform, and every other reform, will be rendered all the more easy of accomplishment.



## SMALLPOX.—A WARNING TO THE DRINKER.

"At the meeting of the Metropolitan Asylums Board on Saturday, 4th February, Dr. Grieve, of the Hampstead Hospital, said: 'Experience only tended to confirm his opinion, that in nearly every person who had been vaccinated, and to whom smallpox had proved fatal, there had been some previous vitiation of the system, and in the majority of cases that vitiation had been caused by gin-drinking to excess.'"

THIS is a very distinct and articulate testimony, and one, withal, much too weighty to be summarily set aside. It is no mere partisan utterance, or fanatical flourish, but the grave verdict of a professional man on a subject on which experience, position, and official advantages, eminently qualify him to pronounce a judg-

ment. It is further to be noted that he gives it, not as a mere scientific theory, or as a result only rationally anticipated—much as might be said for it under these aspects—but as a simple record of his experience, or testimony to a fact. That fact is one that might well make the ears of every tippler to tingle. It warns him that, as sure as the course of nature, every glass he takes is helping to dilute and dissolve away the charm against smallpox which his parents, with pious care, infused into his veins in infancy, and thus leave him naked and shelterless to the inroads of a disease as malignant as it is loathsome, and which all men, by a common instinct, superlatively deprecate and dread. Painful and oppressive to the sufferer, loathsome to his attendants, tedious in its progress, and doubtful in its prognosis, this fell disease in its severer type will hardly leave its victim till, like the evil spirit in the Gospel, it has “rent him sore,” and left on his features the traces of its ravages in a permanent disfigurement that often changes the very expression. To crown all, as it is one of the diseases which people most dread, so it is one which, when it prevails, they are specially apt to take, for of all human maladies it appears to be the most contagious. Towards the close of the last century, Dr. Haygarth affirmed, as the result of long experience and special attention to this disease, that he was unable to recall any instance in which a person predisposed to it by want of vaccination, or other causes, could be much in the same chamber as the patient and escape the infection. He also mentions, as a fact stated to him by an American physician, that the poisonous element crossed a river 1,500 feet wide, and infected ten out of twelve carpenters who were at work on that bank.

These familiar characteristics of smallpox we thus array in order that the tippler or toper, or, as he would prefer to designate himself, the free or moderate drinker, may bethink him of his peril, and seriously consider whether it might not be worth his while to part with an indulgence which, if the foregoing testimony be true (as true it unquestionably is), may be insensibly floating him towards a disease as perilous as it is unwelcome, and may be all the while paying out of him by the way what capital may be left him of the *vis medicatrix naturæ* by which alone it can be repelled, or grappled with and overcome. If he adopts the conclusion on this head which no wise man will be long in reaching, he will bestir himself instantly and in earnest, and arm himself against his imperious besetment as a moral and responsible being on the way to a great and real danger who has, humanly speaking, the practical issue in his own hands, and whose own will, under Divine aid, must recall his steps from the tremendous verge.

There are still to be found, it appears, even in this advanced generation, individuals who profess to regulate themselves by a very different set of ethics. Oddly enough, a few days after encountering the passage about smallpox which we have quoted, the following morsel met our eye in another public print, relating to a man who had been summoned before the Lambeth Police Court. He was charged with neglecting the vaccination of his child. The report says:—"His defence was that he objected to vaccination from no motive of obstinacy, but from a conscientious conviction that his child lived under God's protection, and that if it were the Divine will that the infant should be afflicted with smallpox, vaccination would not prevent it. On similar grounds he objected to fire insurance, and to making provision against accident. He always relied upon an Almighty power." The Police Court, not being transcendental enough to share this fatalistic ociosity, fined him in ten shillings and costs. Should the alcoholic devotee embrace this theory as a plea for continued indulgence irrespective of consequences—which he has the same right to do as the Lambeth defendant for neglect of vaccination—he, of course, takes a position where no argument of ours, moral or physical, can reach him, but he does so at every cost possible to man. He reconciles himself to his glass, by reconciling himself to all its consequences, actual and possible. He abjures his moral nature, and yet not quite, for it is by a deliberate moral act that, in this much-meaning way, he chooses the evil and refuses the good. We will not, however, imagine that many, even of the besotted classes, can succeed in winking the zenith sun of truth and duty into darkness after a fashion like this. We will rather assume that they are prompt, to a man, to own themselves responsible, and bound, if need be, to change their ways if such lions be in their path; but that they are disposed to question the fact, or at any rate the magnitude of the danger alleged, and demand something more tangible in the way of proof.

Every intelligent patient knows as well as his medical attendant that, after allowing all that can reasonably be claimed for specifics and sovereign remedies, the most sovereign of all curative resources to which all others must be shaped, and to which all are ultimately reducible, is the *vis naturæ* above-named, or the vital and self-recuperative power of the human system to keep disease from getting in, or to cast it out. Many and subtle are the questions that have been stirred on the origin and nature of this vital force, but these in no way concern us here. It is enough that it exists and operates in our organic nature as the instinctive enemy of all disorder, the champion of organic harmony, the efficient principle of cure, and the palladium of health. It will thus exist and operate only so long and so far as we conform our

habits to the laws of our physical constitution. The human body is in a state of constant change, under vital processes of nutrition, growth, waste, and repair, the resultant of which will be the measure of our health and vital energy.

Now alcohol, whatever may be its virtues in peculiar cases and in minuter doses as a medicine, may be safely pronounced, when imbibed as a beverage, and therefore habitually and in quantity, to be "evil only and evil continually." From its entrance into the stomach, its course may be traced in the stomach itself and its secretions, in the circulation of the vital fluid into which it is immediately taken, in the brain and nerve substance on which it fastens with special fury, in the liver and other organs with which it has destructive affinities, and in the inflammatory, disharmonising, and degenerative agency which it everywhere exerts, as that of a venomous serpent, a deadly intruder, which winds itself into all organs and tissues, to be accepted by none but rejected by all, and, if there be vital vigour enough, to be extruded unchanged. Thus, instead of augmenting our stock of vital force, alcohol demands a large expenditure of it for its own expulsion; and, as this process is continued the vital force is still further squandered, and the life-taper may be said to be wastefully burning at both ends.

There are some who realise only the ripened results of excess, and bless their souls that they, at least, have not drifted into rapids like these, whence they can clearly enough see there is little hope of return. It never occurs to them that they have themselves been long gliding imperceptibly thitherwards in a painted pinnacle, or goodly yacht, under the flag of moderation. But we stay not to warn them of the risk they thus run of drifting into excess. It will conduce more to our present purpose to concede to them—what, however, is by no means certain—that they will, in the event, be sufficient masters of themselves to stop far short of that dismal goal. For even if they do, and yet continue to soak their system with alcoholics within the range permitted by the conventional law of moderation, as sure as any law in nature they are descending from the breezy uplands of health into the pestilential fen of *malaise*, and predisposing their system to successful invasion by every form of serious disease.

It is not in the power of alcoholics to minister nutrition, any more than it is possible to gather grapes of thorns or figs of thistles; for alcohol can give only what it has to give. But from nutrition alone, in the wholesome element of alternate exercise and rest, can vital force be evolved. In this state of naturally maintained vigour, or well-balanced health, the system is equipped in defensive armour which is constantly repelling from it invisible germs of flying disease, however little at the time we may be

conscious of the fact. Under moderation-soaking, this protective vigour is being gradually frittered away. What is taken under the label of "nourishment" impedes nutrition; what promises strength takes strength away. Instead of imparting force, alcohol wakes up into wasteful expenditure the force latent in the system by the brutal scourge of stimulation, and leaves it, like a flogged and spent steed, panting and enfeebled. And this is by no means all, or the worst. The "mockery" that calls itself a good is in reality a poison, and thus by universal disturbance of function and deterioration of tissue, it enfeebles the body at a rate accelerated beyond computation. Let any moderate drinker exchange his habitual glass for the pure stimuli of nature, and he will know, as he does not at present, what all this means. Indeed, among the commonplaces of temperance testimony, are the numberless verdicts to this effect given by clergymen and others, when they had abandoned moderation for the more salubrious atmosphere of total abstinence. They have testified that, whereas under moderation they were hardly ever without their dull headache, or other discomfort, they are now in habitual buoyancy and vigour. In the former case they were in disharmony. Their bodies were in an artificial element, in which it was as vain to expect health and strength as to expect stability on the surface of the sea. In the latter case, they were conscious of health as a self-regulating harmony, a solid self-sustaining vigour, which was constantly repelling disease to which, under the alcoholic dispensation, they were habitually exposed.

The result of all this when active disease invades the frame may be readily conceived. It has often been stated. Dr. Dodds, many years ago, in his evidence before the Parliamentary Commission on Drunkenness, was asked: "Do habits of intemperance at all interfere with medical treatment in case of disease?" To which he replied: "That forms one of the strongest points of evidence on which a medical man can give his opinion. There is not a single acute attack which persons are liable to who are accustomed to the use of ardent spirits which we have much hope of being able to cure; the probability, as compared with similar attacks on temperate persons, is as ten to one against recovery."

Dr. Grindrod, in his well-known Essay, thus forcibly puts the case:—

"The loss of vital energy, or power, forms a great source of disease and mortality. Those who have been accustomed to live freely invariably fall an easy prey to the attacks of disease. With such persons the slightest injury is attended with the most serious results. The vital functions are unable to perform their accustomed labours, and consequently the *vis naturæ* is incapable of resisting the effects either of internal or external injuries. Thus the slightest cold, or comparatively trifling physical injury, is, in general, attended with danger,

and often with loss of life. In some inebriate cases, the principle of vitality is so small, that it is suddenly extinguished by little more than ordinary exertion, or exposure to unusual heat or cold; and even, as is not unfrequently the case, by simple indulgence in a glass of cold water."

Now, to apply these principles to the case of smallpox, we have only to consider the violent convulsion which the human system must needs undergo under so terrible a disease. "The nervous system," says Dr. Watson, "appears to be overwhelmed by the force of the poison;" and, speaking of a later stage, he adds:—"After that period, the characters of asthenia commonly predominate, the patient sinks under some casual complication, or the powers of life are gradually worn out by so much irritation of the surface, and so large an amount of suppuration." If such be the formidable incidence of this disease in any case, what must it be in the case of those who have, through long years of alcoholic indulgence, been daily paying away their vital vigour, throwing it recklessly in as fuel to the devouring flame? No matter in what form the results of their intemperance have written their record on their outraged organism. Are they emaciated, as so many habitual drinkers are, under the positive derangements which their venomous beverage inflicts on the organs of nutrition, as well as by the negative influence of their indulgence through irregularity, exposure, and want? Then it is easy to see what feeble show of resistance their breached and dilapidated *vis medicatrix* will make to the assault of smallpox, or any other such fell and formidable disease. Or are they blown out and bloated to the standard of the typical drayman, or the qualification for the next New York "Fat Man's ball"? Then worse and worse. Already familiar to every intelligent man, we might almost say proverbial, is the fact that such models of human magnitude can scarcely undergo a scratch without endangering their lives. The most intractable subjects brought into the London hospitals are those magnificent draymen who might seem the men of all others to set the King of Terrors at prolonged defiance. In cases simple enough with others, amputation is the frequent and prompt resort to give the giant a dubious chance of life. The simple explanation of the matter is, that the drayman has grown to what he is by the copious imbibition of beer, and that this copious indulgence is the natural result of the free licence given him of the brewer's cellar. By this drink he is inflamed and congested in every part, and, in proportion as he is so, the vital and self-recovering powers of the system are weakened and impeded. Hence, as has been said, "he wears his heart upon his sleeve, bare to a death-wound, even to a rusty nail, or the claw of a cat!" Sir Astley Cooper was called to see one such, whose finger had been slightly hurt by a stave splinter. He opened the

abscess, and went his way; but finding he had left his lancet-case behind, he returned—to find the man dying. So fared it too with “Big Ben,” a gigantic drayman, and noted prizefighter. “One day his hand received a slight graze from the wheel of a passing carriage in the crowded street. The skin was only ruffled. Ben wiped away the starting blood, and thought no more of the matter: in one week thereafter Big Ben was in his grave.” Of this class of men it has been truly said: “The whole cellular substance is infiltrated with fluid, they are walking specimens of general dropsy.” If such be their organic condition throughout, and if, in consequence, the slightest injury or supuration may prove to them the harbinger of speedy death, what are likely to be their chances when they are overtaken by a dire disease which overspreads them with “wounds and putrefying sores,” and “makes the whole head sick and the whole heart faint”?

A noted example of the fatal effect in smallpox of previous debilitation through vice, occurs in modern history; and though in no way singular, physiologically considered, being one of thousands of such tragedies that are repeating themselves daily, it is worth a passing reference from the rank of the victim. No reader of Carlyle's great prose poem on the French Revolution can need to be reminded of its opening chapters on the death of Louis XV. Many years before, it appears, Louis, during a dangerous illness, had made solemn vows to reform his life, and dismissed his mistresses; but on recovering, like so many more, he resumed his notorious debaucheries and prolonged them to the end. At length, in 1774, he was attacked by smallpox, having caught the infection in an act of vice from the daughter of one of his gatekeepers. The infection in the palace was so great that more than fifty were taken ill, and ten died. The wretched monarch had long prepared himself to fall an easy prey to the malady. His constitution was ruined under disease contracted in courses of persistent vice that have made his name a bye-word. Confluent smallpox, the worst type of the disease, has at length fastened upon him; and now, says Carlyle, “the Louis that was, lies forsaken, a mass of abhorred clay: abandoned ‘to some poor persons and priests of the *Chapelle Ardente*,’ who make haste to put him ‘in two lead coffins, pouring in abundant spirits of wine.’ The new Louis, with his Court, is rolling towards Choisy, through the summer afternoon: the royal tears still flow; but a word mispronounced by Monseigneur D’Artois sets them all laughing, and they weep no more. Light mortals, how you walk your light life-minuet over bottomless abysses, divided from you by a film!” All Paris broke into pasquils and merry-makings, and the funeral day was a joyous festival.

Though we have spoken of smallpox both in consideration of our text and of the serious character of the danger, it is scarcely necessary to remark that the principles involved in our line of remark are, *mutatis mutandis*, equally applicable to any other form of disease. The terrible criminality of acting the spend-thrift with the most precious natural blessing which the Author of our being has conferred upon us, and with which He has, in varying degrees, but all susceptible of increased development, dowered every human creature He has sent into the world, with the express command both to husband and improve it—namely, the vital and self-restorative forces of the constitution; this criminality and folly is central in its scope, and therefore universally undermining and disastrous in its significance. Hence, in current and commonplace diseases, such as fevers which never cease to haunt the dens and dog the heels of vice and intemperance, the hard or habitual drinkers are thrown down in swathes; while in special epidemics, such as cholera, they are ever the first to feed the maw of the destroyer. Well do we remember how, in one of the earlier visitations of cholera, in a country village, the first and principal sheaves of the deadly harvest were made up of the best and the worst men in the place; the former being well-exercised Christian people who had learned much in the school of affliction, the latter being notorious drunkards who had wilfully squandered their vital vigour away. In both cases, though from widely opposite causes, the *vis medicatrix* had been reduced to a minimum, and so the enemy marched resistless over the broken walls into the citadel of life, and speedily brought it to the dust.



## THE MODERN CRUSADE AGAINST DRAWING-ROOM DRINKING.

WE are often told that a great change has taken place in the habits of the higher classes in reference to drinking—that excess is not now regarded as it was by our forefathers—and that it is no longer correct to speak of an intoxicated man as being “drunk as a lord,” inasmuch as drunkenness has long since ceased to be regarded as an aristocratic accomplishment. This improvement in the manners of the upper classes has been ascribed to the refining influence of education, and it has been assumed, that as education advances among the lower classes similar changes will be effected, and intemperate drinking will disappear. Now, although drinking to excess is no longer thought respectable, and cases of drunkenness are not so

common among educated persons as formerly, we are convinced that there is a much larger amount of alcoholic intemperance among the educated classes than is generally supposed. When we recollect the large quantity of alcohol contained in the wines of commerce, the quantity of wine consumed, and the state of health and the duration of life of the wine drinkers, we are convinced that, if open drunkenness is less common, alcoholic excess is still prevalent, even in the most favoured classes. Our views on the condition of the middle and upper classes have been strongly confirmed by articles which have recently appeared in the public journals on the drinking habits of educated women. The *Saturday Review* startled the believers in the temperance of the upper classes, and the preserving power of education, by an article on "Drawing-room Alcoholism," in which it said :—

"Some sincere effort should be made to check habits which are notoriously on the increase, and which threaten to degrade women, even of the well-born and educated classes, beyond the help of theories, however brilliant, of their rights. It is honest and prudent to confess that drunkenness is no longer quite unknown even in the most charming drawing-rooms, be it under the form of dipsomania or oinomania, habitual or occasional excess."

The same causes which produce intemperance among the lower classes are at work among the upper. The lower classes know next to nothing of the chemical composition and physiological action of alcoholic drinks, and the other classes are almost equally ignorant. This ignorance of the nature of intoxicating drinks is one of the chief causes of their consumption, as well as of the popular belief in the safety and advantages arising from their moderate use. The facts that all wines, malt liquors, and spirits contain alcohol; that the alcohol in these liquors gives them their power to affect the nervous centres; that all the drunkenness of England is caused by the poisonous action of alcohol upon the brain; and that alcohol, in common with all narcotics, can make persons who use it feel an apparent necessity for it; and that in many the desire for it will increase by its use to such an extent as to make them dipsomaniacs, are simple facts known to every medical man, but not known to the dwellers in drawing-rooms any more than to the humbler classes. The *Saturday Review* says :—

"If the *Lancet* laments, as it has done, the over-prescription of stimulants which was 'too much in fashion a few years ago,' its acknowledgment of the perhaps irreparable evil is unseen by the general reader. The literature of temperance societies and police reports does not affect the divinities of our Olympus, who hardly guess the striking resemblance between their nectar and the gin of the 'masses.' Yet something should be done to startle ignorant and well-meaning lady tipplers, who do not imagine it possible that they should approach, and even rival, Irish Biddies of St. Giles's in their craving for the absorption of alcohol!"

It would be a difficult task to persuade the ladies who dwell in splendid mansions, that "wine is a mocker," that their sherry and champagne contain the same poison as the gin of St. Giles's, and that this poison can produce the same physical and moral deterioration in the highborn, the educated, and the refined, as it does in the lower and uneducated classes of St. Giles's. But the fact that no class of society can use alcoholic liquors and enjoy exemption from the effects of the alcohol, is now clearly established. The *Saturday Review* has shocked us with its revelations of the alcoholic intemperance of the women of the middle and upper classes. The *Lancet*, the *Practitioner*, and the *Spectator* confirm these painful revelations, and it is now shown that alcohol produces intemperance in men and women, irrespective of birth, position, and education. Of course, those of us who are acquainted with the action of narcotics, know perfectly well that, although some persons are more susceptible to the action of these poisons than others, this difference does not depend upon rank or education. But the dangers connected with the use of wine and other alcoholic liquors seem unknown or forgotten. Opinions handed down to us from days of physiological darkness, as to the necessity for some kind of alcoholic drink; erroneous notions as to the composition and action of wine and other alcoholics; the medical prescription of "a little sherry," or "a spoonful of brandy," or some "good port"; these are all at work inducing persons to take alcoholic liquors. And then there is the fashion, and the customs of society, sanctioning their general consumption. Can we wonder, then, at the spread of intemperance, or at "drawing-room alcoholism"? It will not do any longer to gloss over the evil, and lay the flattering unction to our souls, that alcoholic intemperance is confined to the lower classes.

The existence of the evil is indisputable. The *Lancet* hopes that the article in the *Saturday Review* may startle "the consciences of that far too numerous class of ladies, in both the middle and upper ranks, who habitually take alcohol in dangerous quantities." But the *Lancet* does not point out how the ladies are to ascertain what constitute "dangerous quantities." We think it would be much better if the article in the *Saturday Review* should open the eyes of the ladies to the dangerous "quality" of alcohol. It is its bewitching, enslaving "quality," that is the thing to be dreaded, for a little is supposed to be innocent or useful. The ladies who now take alcohol in "dangerous quantities," began with what we suppose the *Lancet* would call "safe quantities"; but gradually, slowly, imperceptibly, they have advanced to "dangerous quantities." This is the usual course of intemperance, whether in St. Giles's or in the more refined regions of Belgravia.

That intemperance prevails to an alarming extent, and that it numbers among its victims even those who dwell in drawing-rooms, is beyond all dispute. The question then arises, What can be done? How may the educated mothers, and wives, and daughters of Britain, be saved from this curse? As the evil is caused by the use of strong drink, one who has proved by personal experience that all alcoholic drinks are alike unnecessary, would at once propose total abstinence as the remedy. But the great masses of the community do not understand this. Even the medical profession have not yet acquired this teetotal experience; and hence, all sorts of expedients and palliatives are proposed in preference to the radical remedy of abstinence. The *Lancet* suggests that the medical practitioner should adopt certain absolute rules of precaution in reference to the prescription of alcohol—that if he prescribe alcohol at all, it should not be for trivial ailments and miseries which are likely to recur frequently, and for which the patient will probably be only too ready, on a future occasion, to apply the agreeable remedy which was found so efficacious before. This suggestion recalls to our notice the fact, that a great deal of female intemperance has been caused by the thoughtless and unnecessary prescription of alcoholic liquors. The *Lancet* and the *Practitioner* both dispute the correctness of this statement, and assert that tippling ladies are not to be believed when they say that they owe their vicious habits to their doctors. But even the *Lancet* and the *Practitioner* admit that the profession is, to some extent, responsible for the existence of drawing-room alcoholism. After cautioning the profession, the *Lancet* says:—“It is usually dangerous to encourage, or even allow, women to take alcohol, except with their meals; that is to say, except under the notice of other persons.”

This is coming to a pretty pass. Are our choice wines to be labelled “dangerous”? Are our wives and daughters to be kept under a system of watchful superintendence? Is this the only remedy which the *Lancet*, our leading medical journal, is able to suggest for the prevention of female intemperance? Yes, this is all! For the *Lancet* says:—

“There is special need in their case for the limitation, by strict rules, of the *dietetic* use of alcohol, and for absolutely forbidding its employment as a domestic *medicine* without the express sanction of a medical man; and we hope shortly to see the day when every family doctor will have the sense and courage to say this plainly to the ‘house-mother’ in every family for whose health he is supposed to be responsible.”

We now turn to the *Practitioner*, which contains an ably written article on “the use and abuse of alcohol by women,” to see what can be done to prevent and cure female intemperance. The *Practitioner* admits the existence of the evil, states that the women of

our middle and upper classes are becoming infected to a perceptible and alarming extent with the tendency to alcoholic excess, and that a large number of ladies drink, unconsciously, enough liquor to produce a seriously degrading effect upon their mental purity and energy. After attempting an apology for the part the doctors have had in the production of female intemperance, the *Practitioner* is compelled to admit "the partial responsibility of the medical profession for its occurrence," and suggests a better system of diet for young women, the almost entire withholding of alcohol, and an improvement in female education. "'Plain' but copious 'living' should be combined with 'high thinking,'" and it adds that, "not needlessly, then, do we suggest the training of the higher faculties of the mind as an essential prophylactic against that morbid state of the nervous system which places young women in danger of abusing an agent, like alcohol, of which they may have casually discovered the power and the charm." The *Practitioner* also says, "We have no desire to absolutely forbid alcohol to young ladies; but we do insist that their habitual allowance ought to be very small;" and it further proposes to do away entirely, or for the greatest part, with the provision of alcoholic drinks at evening parties for women. Now all these suggestions are good enough in their way, but there is nothing in them calculated to eradicate the desire for alcohol in those women who have already acquired that desire. Nor do we see how these proposed restrictions will prevent the formation of the alcoholic appetite in others. Indeed, there seems to be no way in which the use of alcoholic drinks can be kept up so as to preclude the creation, in some persons, of that growing desire for the absorption of alcohol which ends in dipsomania.

The *Spectator* has given an excellent article on "Women and Alcohol," which we hope may assist in keeping the attention of the public to this important subject. The *Spectator* shows how the habit of using alcohol is connected with the present customs of society, and the peculiar temptations and difficulties connected with what we should call the "fast life" of the upper classes. The *Spectator* suggests the diffusion of knowledge as to the nature and effects of alcohol, and says the medical profession, which has partly caused the evil of female intemperance, "may do much by private advice, more by diffusing, or helping laymen to diffuse, a little ordinary knowledge. For instance, it could very easily indeed do one most important service,—prohibit altogether, as the *Lancet* has, by over-reticent phrase, advised, the use of alcohol by girls under twenty-one. They should have none, simply. If they cannot get along they should have less work, more sleep, or, what is nearly as good, more opportunities of lethargic quiescence, and endless milk; but it should be 'good form' for them to be abso-

lute teetotalers." This is much more likely to prevent the formation of the desire for alcohol, than insisting that the habitual allowance should be very small ; for we have a firm belief in total abstinence being better for the young than even a very small allowance of alcoholic drink.

Having noticed the suggestions of others for dealing with the alcoholic intemperance of the ladies, we will now briefly state our views. In the first place, then, as one cause of the use of strong drink is ignorance of its properties, we recommend the diffusion of a knowledge of its composition and physiological action. And secondly, we can see no certain way to prevent intemperance except by training up the young to live without alcohol. It is in vain to inculcate moderation, for everybody acknowledges excess to be bad, and it is quite futile to attempt, by fixing limits to the quantity consumed, to prevent the creation of a liking for the effects of alcohol upon the nervous system. And thirdly, in none of the remedies which we have noticed has there been any practical suggestion for the cure of the ladies who are addicted to excess. We hold that it is not enough to call attention to an epidemic disease ; we should also try to prevent its spread, and cure those who are attacked by it. How, then, are the ladies who are suffering from the intense desire for alcohol to be cured ? We know of only one effectual way, that is by ceasing to use all kinds of alcoholic drinks. This is an old way of curing the disease, and modern science has not yet discovered a better. We have seen the most confirmed inebriates abandon the use of all intoxicating drinks, and recover health of body and mind, and live happy, useful lives, and, what may appear strange to persons who have not had experience in these cases, we have never seen any ill-effects follow the entire disuse of alcoholic liquors either by the temperate or the intemperate. The number of persons in this country who live without the aid of alcohol is now very great, and their experience teaches them that abstinence conduces to health and happiness. A knowledge of the advantages of abstinence is slowly spreading through all ranks of society, but there are great difficulties in the way of the general disuse of alcoholic drinks. Ignorance of the nature of the drinks, the customs and social arrangements of society, and the desire for the peculiar effects of alcohol upon the nervous system created by its use, all stand in the way of temperance. But in our opinion one of the greatest obstacles to the more general practice of abstinence by the educated classes, is not so much want of knowledge, as an unwillingness to fly in the face of all our hospitable customs, and to mar the happiness of others by showing that these customs are "more honoured in the breach than in the observance."

## CHRONIC ALCOHOLISM.

“The passion for intoxicating drinks paralyses the will and obtains a complete mastery over the understanding and moral sense, making every other emotion of the soul subservient to its base and demoralising influences.”—  
Dr. FORBES WINSLOW.

At this juncture, when Parliamentary legislation is being sought to enable patients labouring under the various consequences of uncontrollable drunkenness to be placed under strict supervision and proper treatment, with the view of re-establishing the bodily health and restoring the lost self-control, any evidence of the fearful results of chronic alcoholic poisoning is worth consideration. It is not, however, the intention of the writer at present to wander far into the discussion of the desirability of obtaining lawful power to curtail for a time the liberty of those afflicted with a morbid propensity for drink, for the purpose of protecting themselves and their friends from the fearful impulses of their perverted instinct. The necessity for such power is painfully evident to most regularly constituted minds, when they contemplate the extent to which this vice prevails in all ranks of society. The object of this article is chiefly, however, to draw attention to the great danger of prescribing alcoholic stimulants in cases of nervous depression, or where there is great sensitiveness of the nervous organisation. Too much caution and circumspection in this respect cannot be exercised; for the sad results of the practice of indiscriminate administration of ardent liquors are to be found on every side. The authority of the doctor is so frequently put forward as a plea for tipping by sick persons labouring under every variety of disease, and by healthy people who have at one time had an ailment of some kind or other, that it has become proverbial. “My doctor recommended it,” says the drinker, “and I have taken it ever since, for I feel it does me good; although, to tell you the truth, I do not like it.” The fact is, that practically, like the famous Mrs. Gamp, they have the bottle handy, and put their lips to it when they “feel so disposed.” Where the doctor is really responsible for this indulgence, it looks something like a man involved in a matter which requires him to consult a lawyer, who, after giving him the necessary advice, leaves him at last to conduct his own case. There are plenty of instances of chronic alcoholism caused by hereditary tendency or positive mental disorder; but these will not be considered here, as space will only admit of a slight reference to those cases artificially induced or provoked. The susceptibility of the female sex to the influence of alcoholic excitement makes it imperative on the part of medical men to

prescribe with the greatest caution the administration of wines and spirits. In all cases of hysteria it is foolish, because the great object of the treatment of such cases ought to be the re-establishment of self-control, so necessary to the calming of the supersensitiveness of the condition so common in these patients. Moral influence is of the greatest use in restoring the balance of nervous power and aiding the will to keep down the liability to nervous excitement. *Alcohol in any form exercises no moral influence.* In uterine affections it is most hazardous, many women having become inveterate drinkers through the incautious and indiscriminate recommendation of strong drinks, particularly fiery wines and ardent spirits, by medical men. We give two illustrative cases.

Case I.—Mrs. L——, aged 39, the wife of a labourer, residing near the sea coast, consulted the writer in the spring of last year. She was a strong, muscular woman, active, and possessing great motive power. Before her illness she was always exceedingly temperate. Through nursing a sick child, which ultimately died, after a lingering illness, during which she lost much rest and took little or no outdoor exercise, she became afflicted with great nervous depression, for which she obtained medical advice. In addition to medicines, she was ordered at different times brandy and sherry. She was then taking one quart of porter and three glasses of port wine daily, by order of her attendant! She was to take brandy also, if she thought it necessary at any time. She was highly nervous and excitable, tremulous, sleepless, desponding, seeing and hearing strange things; in fact, apparently on the verge of delirium tremens. Had been in this way for many weeks, ever since she went under treatment. Ordered a draught, for the first night, of tinctures of opium and Indian hemp (not to be repeated), which produced a fair amount of sleep; aperient enemata, quinine and iron, beef-tea, milk, &c. In a fortnight she was sufficiently well to go home; after which she was sent to a convalescent home for a month, but she did not entirely recover for nearly a year. As far as possible the alcoholic drinking was prohibited and prevented. In this painful case the husband was left to struggle with a large family as well as he could, and his wife was pushed almost to the verge of madness through the determined and persistent recommendation of spirits and wine to a constitution unaccustomed to it. She was depressed. Excitement was the remedy suggested, and supplied in the shape of alcoholic stimulation. The fact that she recovered only when the intoxicants were withheld, is significant.

Case II.—Mrs. S——, wife of a sailor; married young, and left much alone. Through having ardent spirits recommended to her, she acquired the habit of drinking, and for years had

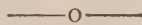
partaken of the dangerous remedies placed at her disposal, until she became a confirmed tippler. Articles of clothing, furniture, or other available things, were sacrificed to the enslaving passion, until ruin seemed inevitable. Prohibition became necessary, in consequence of the condition of mind of the patient, who fell into a complete state of melancholia, requiring constant watchful care to prevent threatened self-destruction. Notwithstanding for several months the patient has abstained entirely from alcoholic compounds of every variety, the brain has been so shattered by previous long-continued inebriation that the effects do not readily depart, although the exciting cause is removed. Indeed, it is possible, if the life be prolonged, that the case may degenerate into one of complete imbecility. At an early age, a wife and mother is thus rendered incapable of fulfilling the duties of life in her station, which might have been one of considerable comfort and even luxury.

These cases might be multiplied, but they are sufficiently illustrative to show the grave consequences of hasty, thoughtless, unscientific prescription of alcohol where the patient is an educated, though delicately constructed or highly organised, being, or an ignorant, powerfully-built, muscular peasant. We ought to pray for more light !

H.



## Miscellaneous Communications.



### DRAWING-ROOM ALCOHOLISM.

(From the *Saturday Review*.)

THERE is an increasing evil under the sun, one of pressing importance, but so contrary to our English traditions and to our notions of the fitness of things, that we are unwisely inclined to hush it up. Now and then, however, a whispered scandal reminds our Pharisees that a Pharisee's wife indulges in alcoholic stimulants, "has been taken away from some ball by her friends, quite drunk, poor thing! How shocking!" or "Really should not have been allowed

to ride when she could hardly sit on her horse." But such stories we agree to get rid of as quickly as possible: they are "too painful" for women who stand on the brink of the same precipice down which Lady A. or Mrs. B. slipped out of sight even within London memory. Even men do not relish exposures of the sort, or care to joke about what is too contrary to the natural order of things to be amusing. Yet some sincere effort should be made to check habits which are noto-

riously on the increase, and which threaten to degrade women, even of the well-born and educated classes, beyond the help of theories, however brilliant, of their rights. It is honest and prudent to confess that drunkenness is no longer quite unknown even in the most charming drawing-rooms, be it under the form of dipsomania or oinomania, habitual or occasional excess. Ever since the Flood our heroes have, we know, distinguished themselves by their potations; but it remained for the heroines of our society to claim that prerogative of the stronger sex. It would seem that our doctors are too professional, our clergymen not professional enough, for candour on this ugly topic. Medical men are hampered by several considerations, some of them obvious; and spiritual counsellors belong to another age. If the *Lancet* laments, as it has done, the over prescription of stimulants which was "too much in fashion a few years ago," its acknowledgment of the perhaps irreparable evil is unseen by the general reader. The literature of temperance societies and police reports does not affect the divinities of our Olympus, who hardly guess the striking resemblance between their nectar and the gin of the "masses." Yet something should be done to startle ignorant and well-meaning lady-tiplers who do not imagine it possible that they should approach, and even rival, Irish Biddies of St. Giles's in their craving for and absorption in alcohol. There is at present a singular push for power among women which suggests rather a deterioration than a development of the female intellect and will. This feverish self-assertion is a confession of weakness. The sources of their legitimate influences are being exhausted; their old power is waning visibly, and even ridiculously collapsing. But though they may deserve a lesson, it is a serious social misfortune that woman should be displaced from her right position in our homes. A habit that isolates and degrades her, while at the same time she retains her rank as wife and mother, is not only dangerous to her

individually, but to society, and perhaps more subtly mischievous than the crime for which she forfeits her place in the world, just as unacknowledged disease may work insidiously greater evil than a confessed sore.

Vice in women is, moreover, almost more fatal to social safety than crime in men, for custom is more than law in the conduct of a people, and women—especially the women of the upper classes—have large control over custom. The rich escape the publicity of their practices which befalls our poor, and consequently we cannot so well guess at the causes of that failure in duty at home, and in discretion abroad, which appears to be on the increase; but there is reason to believe that the frequent "pick me up," the mid-day and afternoon sherry or champagne, may have much to do with the pace at which young men and maidens, old men and children, Mayfair mothers and Belgravian beauties, are posting downhill. Not a few actual cases might be quoted for sensational purposes, but we have not space, even if this were a fitting occasion, to describe how Mrs. A. destroyed the peace of her home until she was removed from further trouble by permanent imbecility; how Lady B. brought herself and her children to complicated grief and disgrace as she let fortune, friends and faith slip through her reckless fingers. Even if we enumerated the long train of diseases to which drunkards are liable, we doubt if the horrible list would lessen the use of alcohol by a single wineglass. Indeed, novelists have lately treated us to many elaborate scenes of *D. T.*, which we doubt to be wholesome study even for poor souls who are struggling to escape from their habitual vice.

But there are some facts and considerations that may be usefully put before rash but well-meaning women who have tampered with drink, but who are yet capable of self-control, and before all persons who may be concerned in the safety and welfare of a home where there is even a slight tendency to ring for irregular glasses of wine—where there is a chronic

epidemic of attacks or sensations requiring alcoholic cure, or even where there are complaints of periodical sinkings and unaccountable depressions. Most doctors will confess that the fashion of stimulation has been overdone; but it is true that they are seldom consulted about the disuse of the drams they ordered for some special need, and the tablespoonful of brandy is often found so agreeable a stimulant that a second is added, and even a third, to meet the strain on nerves and stomach which an ordinary day of "society" involves. It is a curious fact that, though more rapid in its effect on the will and principle of women, alcohol does not act with the same speedy mischief on their health as on that of men; and so it happens that they drift into courses hardly suspected or partly excused by the dozen ailments always in reserve to account for my lady's social shortcomings. Meantime their moral self-control is daily weakened, and secondary passions appear in the wake of the ruling one, which the weakened will is unable to check. Indulgence in any vice always entails others, but the distinct effect of alcohol is so to affect the nerves and brain that the material power to resist any temptation is lessened in proportion to the quantity taken. This is hardly, then, a safe stimulant for women, nor will it, even in small quantities, advantageously develop their peculiarities. We are not writing a teetotal tract, so we will not dispute the valuable qualities of fermented liquors; but the limits to their beneficial use are passed when a woman in average good health feels inconvenience if she cannot have her favourite dram. She may, in favourable circumstances, and if of regular habits, go on safely for a time, but she is within reach of many evils. A chance shock, mental or physical, illness, sorrow, bad example, may leave her weak before the encroaching power which, most of all vices, drinking possesses, and before she is aware of it she may find herself in great, if not hopeless, difficulty. "There exists," writes Dr. Marcet,

"in the substance of the brain a well-known attraction for alcohol;" so the enemy not only attacks from without, but creates mutiny in the very citadel of our will. In, of course, a small, but still a perceptible, degree the controlling power of the brain is impaired when the daily dose of sherry or other spirituous compound is confessed to be a needful comfort. And, with all respect to Lady Amberley, women's brains are not their strongest point. They have plenty of imagination, which is liable to be excited; but they have not much will to spare, and are especially liable, even at their best, to the depression which is aggravated by alcohol. And besides these physical mischiefs, what shall be said of the damage done to mind and character in proportion as drams become habitual? We do not wish to be hard on the victims to bad customs, to over-doctoring, and, in some cases, to hereditary tendencies, but their demoralisation is extraordinarily rapid when once they have taken to "pegs" between meals. The craft with which a woman naturally truthful will baffle observation when her craving for alcohol is on her, shows how intensely and semi-maniacally she has concentrated her intelligence on the indulgence of her ruling passion. The devices of lovers seem poor in comparison with the skill with which she will make raids on the cellar, supply herself with strong waters in perfume bottles, and establish relations with the nearest public-house. She will bribe, lie, and steal, sacrifice credit, position, and the affection of those dear to her, sooner than do without the stimulant for which her brain and whole system call imperiously. And, poor wretch! though she has no illusion about the evil case she is in, she can't help herself when once she is alcoholised to a certain point. We could multiply stories of the shifts to which well-fenced-in ladies have been reduced when in their own homes spirits were not easily attainable; how one took to stealing the spirits of wine used for lamps, and another employed an old-clo' man to fetch her champagne. The strategy used to

secure the private drams of London ladies would suffice to outwit Bismarck, Von Moltke, and all their following, and would baffle an Asmodeus. But with what ruin to character and happiness! We will not dwell on extreme cases, though they are daily becoming more frequent, for even what may be called moderate drinking is the wide door to disgraceful excess and nearly incurable vice. The increasing prevalence of what is considered allowable stimulation is the evil we would point out. Marguerite dallying with Faust's gifts is but the prelude to Marguerite's suicide, and it is more useful to check her as she opens the glittering casket than when she is the helpless prey of passion.

It is probably a misfortune for women that in their own homes they have less employment than they had in other days before machinery interfered to do everybody's work. There is not incumbent on them the same duty to be useful, but there still remains for them the duty to be as ornamental as is consistent with fashion. Supposing the lady of the house never exceeds the sherry she can carry with dignity and self-approval, and gets decently through her daily round of deadlively occupation, she remains a proof that a woman with a taste for strong liquors has seldom any other taste. Her maid puts on her clothes, but she is careless of her appearance, and even liable to personal unkemptness. She is often unpunctual, fractious before her dram, and dull afterwards. She does not cultivate friends or acquaintances who could be any check to her practices. She likes her mankind to be much away from the house, and if they take no notice of the quantity of wine consumed in their establishment she will be affectionate, if rather stupid, to them. Of what is pure and noble in life she loses appreciation, while all that is animal is intensified in her. If she has children, they will probably suffer from constitutional depression and weakness and "tone," will be plentifully supplied by port wine, and even brandy, from their infancy up. With the career of the

boys we are not here concerned, but of the girls what may or may not be prophesied? If they have escaped positive disease by the time they are launched in the world, they will be, at all events, dependent for their "go" in society on copious champagne and frequent sherry. Naturally they will join the increasing mob of fast girls, with all that is involved in that evil. We are sensible of a distinct moral relaxation among women, and of a new sort of unwomanly recklessness in the presence of men. We complain of a prevalent coarseness even among the virtuous, not only of manner, but of imagination and pursuits, and we are sometimes tempted to prefer the age of Nell Gwynne or Madame de Pompadour to the actual confusion of daredevil women and unabashed spinsters. It would seem that alcohol has something to do with this disorder, for the physical effects of it on women are proved by medical investigation to be precisely what would denaturalise them. We know how repulsive are most forms of mania in women, and hard as the saying may seem, the development of impulse and the lessened self-control which follow the slightest excess in strong drink are symptoms of a brain excitement that is the precursor of disease.

A line, we think, can be drawn; and it is certainly time to observe the limits where wine ceases to be useful as a stimulant of circulation, and becomes poisonous as a narcotic, and morally ruinous. What appeal can we make that will be most likely to succeed? Let every woman who, from whatever cause, finds herself increasing her old quantity of drink, take timely alarm. In the earlier stages of dipsomania the victim will rationally acknowledge every fact connected with it, and will even expatiate on its horrid possibilities, but five minutes afterwards she will swallow an increased dose of the confessed poison. Education and intelligence are rather against her than otherwise, for they make her believe that she at least is safe. Women seldom drink for the gratification of their palate, and

the pitiable dram drinker sometimes loathes the spirit she gulps down. Good or bad wine, potato-brandy, curaçoa, or gin, will satisfy her if only her nervous organisation be sufficiently saturated. The volume of light wine or beer sometimes taken is almost incredible. And it is a bad sign when little is drunk at meals by a lady whose flushed face and full eye and hot hand betray that alcohol has been freely applied to her blood, whose loosened tongue and slightly reckless manner announce unhealthy brain action. Had she taken her allowance of wine with food, its effects would not have been so powerful or so immediate. It is easy to guess how deceit becomes as habitual as her vice, and how her daily life is a struggle to secure her dose at any cost of self-respect. She is continually driven to act a part, and is never at ease except when she arrives at the 'tone' she requires. To do this an increasing quantity of alcohol is needed up to the time when debility sets in, or some accidental trouble reveals her alcoholisation. Then the doctor appears, and if any of our readers wish to know what chronic alcoholisation involves, we will refer them to that bland official, and hope that in this one class of disease he will not conceal the truth. But before the doctor is called in—and he indeed is not able to do much in cases where woman's wit and weakness combine with positive disease to baffle him—might not husbands, fathers, and whomsoever family life may concern, interfere and endeavour to control the doings of their woman-kind? It will not do to pooh-pooh the dangers of drinking for our "world of fair ladies" of whom we have been so proud and foreigners so envious. We doubt if half a dozen Regencies and a Napoleonic Empire would be as bad for them as brandy-and-soda of a morning, or untimely sherry, or any tampering with the agent of so much possible mischief, sanctioned as its presence is on every table and at every street-corner. And it is a mischief that rapidly becomes irremediable for women of the higher classes. Few

husbands would care to send a wife to a reformatory, and home-watching is very difficult and destructive of happiness. Yet not only the vice, but the temptations to it, are increasing with our modern hurry and excitement, and with that vague religiosity which has taken the place of Christian duty. It will need some courage to oppose fashion, and keep away from bad example, and struggle with hereditary depression. But one important step will be gained if the use of stimulants between meals is sedulously checked. The test of safety in the moderate use of alcoholic drinks seems to be the power in persons of fair health to leave off their accustomed beer or sherry without inconvenience or moral effort. This test might be occasionally applied by rational women to themselves, or insisted on by their mankind, and we believe that a sensible improvement, both in moral and physical well-being, would generally surprise the fair abstainer.

Had we thought it useful, we should have quoted the latest analysis of popular wines, and shown how little serviceable they are in the animal economy; but in this matter, and when womanly character is concerned, we have preferred to dwell on the moral rather than the physical reasons for extreme and increased caution in the use of the common domestic sherry and the almost equally common domestic champagne.

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(From the *Lancet*.)

A powerful and, on the whole, very truthful article has appeared under the title of "Drawing-room Alcoholisation" in the *Saturday Review*; and we sincerely hope that it may prove effectual in its avowed purpose of startling the consciences of that far too numerous class of ladies, in both the middle and upper ranks, who habitually take alcohol in dangerous quantities. It may be that the description is a trifle overcoloured, but it cannot be said to be more than slightly, and very pardonably, exaggerated. Two qualifications of our

contemporary's picture of lady-like tippling habits are certainly needed. The apparent increase of the vice is not entirely a real increase; improved medical knowledge of the symptoms of chronic alcoholism having led to the detection of a great many cases of secret drinking, which formerly would never have been suspected. And it is a great mistake to believe that the careless prescription of stimulants by doctors is so often the origin of drinking habits in women as might be gathered from the statements of such patients themselves. Women who drink to excess nearly always become liars; and one of their favourite lies is the statement that they first commenced to take large quantities of brandy "by the doctor's orders."

With these abatements, however, we must with sorrow admit both the increasing prevalence of intemperance amongst educated women, and the partial failure of medical men to see and act up to their duty in this matter. We are well aware of the difficulties that surround the medical attendants of ladies. It is very hard for a doctor, especially in a first attendance, so to estimate a woman's character as to feel sure whether she belongs to the select few who may be trusted to understand a direction and obey it literally, or to the much larger class of females who will always interpret doctors' (or any other) orders in their own fashion. It is very often hard for him to guess even whether her real leanings are towards asceticism or towards the opposite extreme of sensual indulgence; nay, more, he cannot but remember that his patient may belong to that portion of society that

"Compounds for sins it is inclined to,  
By damning those it has no mind to;"

and that a severely virtuous tone of external life and conversation is not by any means absolutely inconsistent with the maintenance of a private brandy-bottle. The effect, however, of all this uncertainty upon the mind of a careful practitioner should be to make him adopt certain absolute rules of precaution. He ought always to remember that women are especially sensitive, particularly during all that

portion of their life which corresponds to the activity of the sexual functions, to the temporary delights of narcotic stupefaction. Hence, if he prescribes alcohol for them at all it should not be for trivial ailments and miseries which are likely to recur frequently, and for which the patient will probably be only too ready, on a future occasion, to apply the agreeable remedy that was found to be efficacious before, without summoning the doctor. For women are very apt to think that they cannot have too much of a good thing; and, instead of taking the moderate dose which might relieve pain without narcotising at all, they are extremely likely to take a dose which narcotises—in plain English, makes them slightly drunk. Now the sensation of slight drunkenness, replacing acute pain or mental misery, is—there is no good in disguising the fact—exceedingly grateful to tired and suffering women, and by swift degrees they come to seek with increasing avidity for this kind of oblivion. Again it is usually dangerous to encourage or even allow women to take alcohol except with their meals—that is to say, except under the notice of other persons; unless for serious acute illness, this ought never to be permitted. The occasional glass of sherry or table-spoonful of brandy for mere chronic invalids or "nervous" subjects is a fatal institution. But there is one point on which the writer in the *Saturday Review* dwells that is of even greater consequence than anything which we have mentioned. There is growing up in too many families a hateful practice of allowing young girls between the ages of fifteen and twenty to take a considerable, and even a large, allowance of wine, on account of supposed "delicacy." The practice is utterly unjustified by any physiological need (in the absence of positive and very special disease); and the results, we believe, are most disastrous. It is scarcely possible to doubt that the pursuance of such a system greatly aggravates the predominance of passionate emotions, so easily roused into mischievous activity at this critical period in the development, not only of the body, but of the

mind. A worse preparation for the serious duties of after-life could hardly be imagined; for the direct mischief that it causes is unfortunately attended by indirect evils—in the weakening of will and the moral sense—that are sufficient to spoil the best and brightest types of feminine character; while upon naturally feeble characters they work with the destructive energy of a deadly poison.

In short, we trust that every member of our profession will learn to keep incessantly before his mind the fact that average women are always, but especially at critical times in their organic development, of weak, unstable nervous system, and ill able to withstand the evil effects of an accidental narcotic poisoning. The brain of women is terribly impressionable, and has a fatal *organic memory* (to use a phrase of Dr. Maudsley's) for the pleasing pain of narcotism. There is special need in their case for the limitation, by strict rules, of the *dietetic* use of alcohol, and for absolutely forbidding its employment as a domestic *medicine* without the express sanction of a medical man; and we hope shortly to see the day when every family doctor will have the sense and courage to say this plainly to the "house-mother" in every family for whose health he is supposed to be responsible.

In commenting upon the article published by the *Saturday Review*, the *Temperance Record* says:—"The only merit claimed for alcohol is, that it may be 'useful as a stimulant of circulation'; but the writer does not attempt to prove that alcohol really imparts a useful and healthy stimulus to the circulation of the blood. Many scientific physicians emphatically deny that it does so, and the experience of thousands of teetotalers who were never drunkards has proved that in most cases even a languid circulation has been decidedly improved by the abandonment of a moderate quantity of alcoholic stimulants. But even if it could be proved that a slight benefit might in some cases be secured by an extremely limited and cautious use of alcohol, is it not obvious from

the statements of our *Saturday* reviewer that the advantages gained would be purchased at a cost immeasurably beyond their value? If the 'distinct effect of alcohol is so to affect the nerves and brain that the material power to resist any temptation is lessened in proportion to the quantity taken'; if alcohol, 'even in small quantities,' is not 'a safe stimulant for women'; if 'even what may be called moderate drinking is the wide door to disgraceful excess and nearly incurable vice'; and if 'a sensible improvement in both moral and physical well-being would generally surprise the fair abstainer,' why, we ask, should any sane person, lady or gentleman, incur the terrible risk that is involved in acquiring the habit of using intoxicating liquors? Would it not be much more rational to refrain altogether from exciting the nerves and brain with that which lessens the power to resist temptation, than to continue the use of the narcotic deceiver, until it cannot be abandoned without 'inconvenience or moral effort'? There can be no doubt as to which course is the safest, and if the question were to be decided by reason and common sense alone, the verdict of society would be in favour of total abstinence. But the *Saturday Review* has well observed that 'custom is more than law in the conduct of a people,' and it adds, with equal truth and force, that 'women—especially the women of the upper classes—have large control over custom.' The women of England have it in their power to abrogate a custom that is ruining thousands of the best and noblest of our people. If they fail to exert that power, they will incur a tremendous responsibility. If they do exert it, they may be the blessed instruments, in the hands of Providence, of rescuing many who are already on the road to ruin, and may enjoy the still greater honour and happiness of preventing the young and the untainted from entering upon that course of 'moderate drinking' which is acknowledged by the *Saturday Review* to be 'the wide door to disgraceful excess and nearly incurable vice.'"

## ON THE USE AND ABUSE OF ALCOHOL BY WOMEN.

By FRANCIS E. ANSTIE, M.D., Editor of *The Practitioner*.

ALMOST at the moment of going to press with the present number of this journal we are induced to write the following paper, by seeing in the *Saturday Review* a powerful though somewhat sensational article on "Drawing-room Alcoholisation," which deals with points that touch the honour and conscience of the medical profession very nearly. We had intended shortly to publish some remarks on the special position of women with regard to the use of alcohol, by way of an addendum to our recent papers on the Dietetic and Medicinal Uses of Wines in general, and the appearance of the above-named article leads us to do so at once.

The *Saturday Review* article only repeats, in a more distinct form and with more picturesque illustration, a statement which has been more or less plainly hinted by several writers in medical journals during the last few years, namely, that the women of our middle and upper classes are becoming infected, to a perceptible and alarming extent, with the tendency to alcoholic excess; that in not a few instances this goes the length of positive and shameful tippling either habitual or frequent; and that a still larger number of ladies drink, unconsciously, enough liquor to produce a seriously degrading effect upon their mental purity and energy, although they afford no open scandal to the world.

The *Saturday Review* also not obscurely hints, what medical writers had already hinted, that the tendency to excess in educated women has been in many cases aggravated, if not altogether produced, by the indiscreet prescription by doctors of stimulants, as a relief from the thousand and one petty miseries of body and mind that are the special product, in weak organisms, of the wear and tear of social life, under the high pressure of modern civilisation.

In commencing the consideration of these very grave statements, we shall at once admit our belief that they are to some extent true; and we may remind our readers that, more than eighteen months since, we endeavoured,\* though in more cautious language, and with more specific illustration by particular cases, to arouse the attention of the profession to the existence of these evils. But as the matter has been brought openly before the general public, we think it necessary (chiefly for the benefit of the latter) to make two important qualifications of the general statements of the *Saturday Review*, which it is important, for the honour of the profession, that every one should understand.

It is, in the first place, well known to those who study nervous diseases, though scarcely known at all to the public, that vast improvements have been made, of late years, in medical knowledge of the more obscure effects of chronic drinking; the result of this has been that we now repeatedly detect this vice as the real cause of anomalous symptoms, which in former times would have been attributed to "hysteria," and such-like vague and intangible influences. It is therefore certain that a notable portion of the apparent increase of secret drinking amongst women is simply increased *detection* of the habit. Secondly, as regards the responsibility of doctors, who are supposed to have often given the unfortunate impulse to excess, by the careless prescription of stimulants for nervous ailments, a large discount must be allowed for a fact which the grieved and indignant friends of women who thus disgrace themselves habitually ignore. That fact is, that all tipplers become more or less untruthful, but that female tipplers invariably

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\* Indiscriminate Stimulation in Chronic Disease: *Practitioner*, July, 1869.

become shameless and most skilful liars. And the favourite lie which they invent as an excuse for their habits, is an apocryphal medical order "to take plenty of support and stimulants." We have personally detected the manufacture and skilful dissemination of this particular falsehood in several instances, and the practice is notorious to physicians who see much of nervous diseases.

These qualifying abatements being made, however, we have no hesitation in admitting the general fact, both of the somewhat increasing prevalence of alcoholic excess among educated women, and of the partial responsibility of the medical profession for its occurrence. These things are very serious, and they demand the earnest attention of all medical men. Especially do they appeal strongly to the conscience of those who, like ourselves, have openly argued in favour of alcoholic liquors, both as valuable medicine in particular diseases, and as a valuable part of the ordinary diet of large classes of healthy persons. We frankly admit that our teetotal friends have a right to ask us, pointedly, what course we intend to take in view of the existing and growing evil. They will ask—they do ask—how we can dispute that this spreading of a degrading vice in such unlikely quarters, its dissemination among refined and delicate women, shows the thoroughly treacherous nature of all alcoholic drinks, and the necessity of abolishing their use altogether. In answer to this, we shall endeavour to show that those doctrines which we have uniformly upheld, are not merely entirely guiltless in this matter of the encouragement of drinking by women, but that their careful development in relation to the special circumstances and constitution of women is absolutely necessary, if any really successful stand is to be made against the tendency which we all deprecate.

We cannot, of course, in this place discuss the general arguments in favour of total abstinence, and of the moderate use of alcohol, respectively; we can but indicate our general view of the teetotal panacea, before

describing the plan which we prefer to it. We dispute the intrinsic propriety of total abstinence from alcohol, as a rule to be enforced on the community, for precisely the same reason that we object to monasticism, or any other attempt to defeat and destroy (not to control) any of the legitimate instincts of the organism. For we shall take it as admitted by the great majority of physiologists, that the conscious or unconscious demand of the body for a nervous stimulant element of one sort or another in the daily food, is universal in the history of all but the lowest savage races. And as regards the actual effects of moderate drinking and of abstinence, as shown by experience, we maintain that no reliable records exist, on any sufficiently large scale, to test the results of the latter practice. We must also distinctly repudiate the accusation continually made against those physicians who advocate the moderate use of alcohol, that they take no heed of such facts as are really to be had in reference to the results of teetotalism. We have repeatedly tested, in our own person, the effects of abstinence, and, what is more important, we have had the opportunity of observing them in families where teetotalism has been the rule for two generations, and can affirm that the results were anything but favourable. But upon this subject our final word at present must be this: that it is impossible for one moment to admit the scanty and partial records of teetotalism as in any sense comparable in value to the widespread and immemorial experience of moderate drinking customs. All that can be allowed by the most liberal candour, is the possibility that total abstinence may, in the course of years, produce a stronger case for itself than at present exists.

In the meantime it is clearly the duty of those who think that they see real benefits attaching to the dietetic and medicinal *use* of alcohol, to see if any rules can be laid down, which are practically sufficient to prevent the *abuse* of this agent. And the case of alcohol drinking by women is par-

ticularly fitted to bring this inquiry to a decisive point.

If there be any truth in the doctrine which we have consistently upheld—that alcohol, so far as it is useful, is applied in the economy as a force-producing aliment, but that the amount of it which can be employed in this manner is limited, and that all excess beyond this acts as a narcotic poison to the nervous system—then, assuredly, there must be, apart from the accidental circumstances of disease, three determining factors in the question, What is moderation and what is excess? In the first place, there is the proportion, by weight, of the alcohol to the body, and especially to the blood. Secondly, there is the degree of rapidity of oxidation, proportionate, chiefly, to the amount of muscular and nervous force developed in the organism. And thirdly, when all the alcohol that can be oxidised, has been oxidised, there remains for consideration the degree of vital resistance which the nervous tissue can offer to the residual unchanged alcohol that remains in the blood to act as a narcotic poison. If, then, we seek (among adults) for a type of the kind of organism which would be most feebly tolerant of alcohol, we should find it in women, more particularly in those belonging to the indolent classes. For here (*a*) the bulk of the blood and muscles is relatively small; (*b*) the oxidation processes are moderate; and (*c*) the nervous tissue is weakly compounded, mobile, easily deranged. When we consider that in each of these three particulars women are, on the average, strikingly different from men, we shall hardly doubt that, as a general result, the quantity of alcohol appropriate to their use must be greatly smaller, probably not more than half, the allowance of men of active lives. This being the theoretical probability, what are the facts as actually observed?

Unfortunately, a considerable proportion of the women of the higher, and of the higher middle classes, by no means adhere to any such theoretical standard, but greatly exceed it. In former papers, in this journal and

elsewhere, we have shown that 1½ ounce of absolute alcohol, or two in the case of unusual exercise of body or mind, is about the maximum standard for the allowance of adult men; and the recent researches of Dr. Parkes confirm this belief, at least so far as showing that indubitably evil results follow when it is considerably exceeded. If such a quantity be the proper allowance for a man weighing 160 lbs. (mostly bone and muscle) and always engaged in powerfully exerting either his muscles or his brain, or both, it would surely seem reasonable to say that a woman, weighing say 120 lbs. (much of it fat), and hardly ever using either her muscles or her brain vigorously and continuously, ought, at the outside, not to exceed the daily quantum of three-quarter ounce absolute alcohol, which would represent about two ordinary glasses (two ounces each) of the usual highly fortified sherry or port which ladies prefer. No physician who sees much London practice, however, will deny that a great number of ladies take twice and some three or four times this quantity: it is quite a common thing to find this out casually; and to the doctor who takes that conscientious interest in the general welfare of his patients which we would fain believe that every medical man does take, this is a most embarrassing and disquieting discovery. In what proportion of cases the average practitioner (in whatever nominal rank of the profession) rises to the situation, and acts as the importance of the case really demands, it would be difficult to estimate: our own impression is that these dangerous dietetic mistakes are very often (after a feeble remonstrance) allowed to continue, the doctor thinking that it does not very much concern *him*. Another way in which medical men often fail to do their duty is, that they do not ascertain, with sufficient accuracy, whether a daily dosage of alcohol, ordered for a particular temporary purpose, has or has not been relinquished when the occasion for it ceased. At the termination of an acute illness, such as a fever, or a

confinement attended with great hæmorrhage, in which large quantities of alcohol have happened to be required, it is quite easy to get the patient to give up the remedy: your orders to that effect are cheerfully obeyed. If you fail to give such orders, the patient, though not wishing for it, and even suffering much disgust in the process of taking it, may continue her half-bottle of sherry a day for weeks or months, perhaps. The effects of this are most disastrous, for there is now no true toleration for such doses: the patient really undergoes a daily narcotisation, and a comparatively short course of this conduct is sufficient to implant, in the unstable nervous systems of women, a firmly-fixed drink-craving. It cannot be too distinctly understood that medical men who allow such occurrences to take place are acting, not in accordance with, but in absolute opposition to, those principles which were sketched by Todd, and have been further developed by ourselves.

We shall not occupy space, now, by going over the ground on which we most dwelt in our article of July, 1869: viz. the peculiar dangers of alcoholisation to women who suffer from neuralgias, especially that painful kind which attends *dysmenorrhœa*. But there is one aspect of the relations of alcohol to women upon which, as yet, we have nowhere dwelt, and this omission we are most anxious to repair. We have already laid down, on various occasions, the principle that alcoholic narcotisation is specially dangerous to women during the whole period of sexual life, and especially at the crises of that life. We have also expressed the decided opinion that young persons of either sex, whose frame has not yet consolidated, should, as a rule, be limited to very small quantities. But we have not expressed with distinctness the strength of our feeling on the question of alcohol, as an article of diet for young girls between puberty and marriage. For some years past we have been silently watching the course of social customs on this point, but it is now our duty to speak plainly.

In the first place, we must notice the fact that many girls of the wealthy middle, and of the upper classes, *especially the former*, are of late years taking to consume all kinds of wine, and particularly champagne, to an extent which used never to be permitted. At many modern ball-suppers champagne flows like water, and the attentive observer will soon perceive that it is not the men, by any means, who do the largest part of the consumption. These same young ladies, who have so freely partaken of champagne overnight, will next day, at lunch, take plenty of bottled beer, or a couple of glasses of sherry. Dinner comes round, and again either champagne, or hock, or port, or sherry, is drunk, not less than a couple of glasses being taken. And then the evening very often brings a party of some kind, with the inevitable champagne or sherry. We are speaking of things which we have seen, when we say that many girls who live among rich (especially *nouveau riche*) and gay society, are in the habit, during six months out of the twelve, of taking (in the shape of wine, &c.) a daily average of *two, two and a half, or three ounces of absolute alcohol*, a quantity which, if expressed in cheap beer, would be equal to *six or seven pints*. Exceptional instances could be cited, of even larger quantities being taken. We have only one word for all this, and that is one of unmitigated condemnation; and we maintain that the family doctor who sees this sort of thing going on, without most strenuous remonstrance, is highly culpable. Persons who do not closely observe what goes on around them, may think that the *Saturday* reviewer exaggerated, or suggested falsely, when intimating that an unfavourable stimulus is often given to the animal nature of young women, by a careless adoption of the habit of taking considerable quantities of wine; for our own part, we believe the remark to be perfectly correct. We do not mean to say that, in any considerable number of cases, the change of character is one which shows itself in overt acts; but there is a subtle change, percep-

tible enough to those who study character with any care, telling of the gradual decline of the intellectual, and the increased prominence of the sensual, tendencies; and this kind of alteration we have ourselves observed, or we are greatly mistaken. But the *Saturday* reviewer has made what seems to us a strange mistake in one respect. He speaks as if he thought that the present agitation in favour of "women's rights," were a phenomenon parallel to, if not directly connected with, the results of the various influences which, in modern society, seem to stimulate the animal nature unduly. In this we think he does a great injustice, and really fights against the objects which he has at heart. There may be any amount of exaggerated and mistaken enthusiasm mixed up with the women's rights movement; but we believe, and to that extent it has our sincere sympathy, that so far from that movement being dictated or in any way influenced by a coarse desire to share the material indulgences which are at present more easily excused in men than in women, it is a direct revolt against the whole tendency to sensualism which the state of society during the past few years has developed into such unpleasant prominence. The hardened blue-stocking of the self-asserting type is no very favourite character with us; but she is positively refreshing when contrasted with the full-blown specimens of young ladyhood who seem to be perfectly content with life so long as it consists of an endless round of dancing, heavy meals, and copious champagne, and theatres at which one listens to idiotic burlesques enlivened (!) with breakdown dances. And it can hardly be denied by any one that the latter kind of female character has become astonishingly more common of late years, indeed the prevailing cast of our public amusements indisputably proves that this is the case.

It may be that we think too strongly on this point; but we confess that in our opinion alcohol ought to be almost entirely withheld from young women during that critical

period of their lives when the sexual function is developing. Very large supplies of simple nourishing food can and ought to be taken, under the stimulus of unlimited fresh air, and free physical exercise; but the appetite and digestion should not be stimulated with alcohol, except in cases where one or other of those distinctly diseased conditions exists, which we specified with some care in our article on "Indiscriminate Stimulation."\* And there is another item of management which we venture to think is of as much consequence as anything. "Plain" but copious "living" should be joined with "high thinking." It would be easy to misunderstand our meaning, and to fancy that we were partisans of the pestilent modern system of cramming young ladies with disjointed fragments of two or three dozen different languages and sciences. We mean the very reverse of all this. The habit of mind which is most nearly and closely associated with a somewhat too stimulating diet, is one to which the profitless excitement of the cramming system is most congenial; it is the very opposite of that which we should desire to see cultivated among young ladies, and which should have for its aim the acquirement of a satisfactory knowledge, not a mere smattering, of the chief works in English, French, and German history and literature. All this may be thought a sad digression; yet it is really directly connected with our subject. These wholesome stimuli of the mind are not merely negative in their relation to the development of the organic nervous system. If all the studies which a young girl is put through consist of hasty and artificial cram, her permanent objects of interest—the things to which she turns with real liking—will not be the refined pleasures of poetic feeling and imagination, but the coarser emotional stimulants afforded by sensational novels,—and that man must be strangely unobservant who does not see the growing demand for this kind of mental

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\* *Practitioner*, July, 1869.

food, and the increasing coarseness of the material with which alone a large class of our young ladies can be satisfied. A state of mind is unquestionably thus fostered, in which every animal feeling comes nearer to the surface of the character, and has greater prominence in daily life than it would otherwise have had. There is no need to tell any medical man how frequently the painful results of this are seen in general disturbance of the nervous system. But we believe that it is only those physicians who practice specially in nervous and mental diseases who at all suspect the frequency with which such cases are complicated by the development of a passion for drink which must be considered as only one special phase of the unhealthy predominance of organic excitability over voluntary energy and the power of self-control. Not needlessly, then, do we suggest the training of the higher faculties of the mind, as an essential prophylactic against that morbid state of the nervous system which places young women in danger of abusing an agent, like alcohol, of which they may have casually discovered the power and the charm.

To conclude this paper in a practical way, we shall make one definite proposal which deserves the careful consideration of medical men. We have no desire to absolutely forbid alcohol to young ladies; but we do insist that their habitual allowance ought to be very small, and, above all, that irregular occasions of taking it should not be provided. In reference to the latter point, there is one proposal which, if approved by medical men, and strongly urged by them on the fathers and mothers of families, would probably effect a great reform, and remove a

source of serious danger: we mean the proposal to do away, entirely or for the greatest part, with the provision of alcoholic drinks at evening parties for women. It may seem a Quixotic project; and to some it may appear disgustingly inhospitable. Yet it seems to us that the true ideal even of hospitality (and assuredly that of real refinement) is to be found in the custom, still lingering in many continental places, of simple evening entertainments at which there is not very much to eat, and nothing to drink beyond a little lemonade and iced water, but which are frequently repeated, and are made thoroughly amusing to the guests by careful provision for their varied tastes for music, dancing, charades, &c. &c. The modern rout or ball-supper is becoming a perfect nuisance, intolerable in the burden of expense which it lays on folk of moderate income, and not without danger in the taste for free wine-drinking, which is occasionally generated by a liberal supply of champagne and moselle. It may be taken that nearly all the wine consumed at these entertainments is so much in excess above the otherwise sufficient daily quantum drunk with the ordinary meals. And if it be argued that the fatigue of long and late entertainments really does create a demand in the system for a decided stimulant, then we shall answer that the obvious remedy is the abridgment of these same entertainments, the preposterous length of which is notoriously the terror and disgust of every sensible man and woman who has outlived that brief time of calfhood in which it seemed pleasant and gay to kick up one's heels till four o'clock in the morning.—*The Practitioner*, Feb., 1871.



## WOMEN AND ALCOHOL.

(From the *Spectator*.)

THE extreme bitterness with which the *Saturday Review* usually writes of women—the undertone of annoyance

at their impudence in being so important as to deserve discussion—always impairs the effect of its dia-

tribes against feminine aberrations; but it hit a blot the other day, when it denounced as a growing vice among women the habit of taking stimulants. Of course, the *Review* was only too delighted to be able to produce so good a reason for being angry, and represented everything in as sensational a light, not to say as ill-natured a light, as possible. That goes without talking, but still the *Review* was right, and in the right, doing good service to society by exposing an evil which is growing, which is grave, and which can be cured only by exposure. The medical journals all admit the truth of the main charge, that refined women of the wealthier classes are living lives so full of excitement as to tempt them more and more to seek an artificial support in stimulants which have a ruinous effect alike upon mind and character. The *Lancet*, after certain reserves as to the sensational form of the statements made, openly acknowledged their substantial justice; and now the *Practitioner*, a quiet, thoughtful magazine, which tries as far as possible to be strictly scientific, admits and endeavours to account for the growing mischief. Its statement is in substance that of the *Saturday Review*,—that women of the higher middle class, with much leisure and much money, show a new disposition towards a vice supposed to be exploded among men; that they swallow in the morning, at lunch, at dinner, and at evening parties, quantities of wine or liqueurs which keep them in the condition known as permanent alcoholisation, the most dangerous condition into which a man can fall, and from physiological differences infinitely more dangerous to a woman. She cannot endure it for half the time, and owing to her lesser degree of nervous strength, her exemption from labour, and her disinclination to severe exercise, its effect tends much more directly to diminish nervous power, that is, in fact, to obscure the mind, to deteriorate the moral character, and to increase the liability to insanity.

There is no smoke without fire, medical men of high repute do not assent to charges telling directly against

themselves—for the doctors have advised the practice they now deprecate—without reason, and there are many reasons why this charge should *a priori* be considered possible. The pace of life has increased for the higher classes of women until it is now much faster than for men. They have more to do, a shorter time to do it in, and are more admired for doing it well than was ever the case before. A young woman in good society in London nowadays is worked from three o'clock in the afternoon till three o'clock next morning, twelve consecutive hours, almost as severely as an actress—who, after all, undergoes her full strain only from eight p.m. to midnight, and gets jaded upon that—and with much shorter intervals of real relief; and as no natural strength, except in the most exceptional instances, will respond to such a demand, she naturally looks around for some artificial support, for a whip to keep her from flagging. Where is she to find one? Rest is impossible without breaking with all the rules of her world, which no woman will do; she knows nothing of physiology, nothing of the commonest principles of diet—which men, on the whole, do obey—and nothing of the real effect of alcohol. She never learns what men learn from being really drunk, in the police-court sense, perhaps once in their lives: never recognises clearly, as all men do, even drunkards, that at some depth or other there is poison in the cup, poison producing illness as certainly as any drug. She eats her only full meal in the middle of the day, instead of eating it when the system most requires strength, namely, in the time of exertion; she does not smoke—tobacco is probably injurious to the sedentary, but to the active it is a sedative—and she is taught to consider the only stimulant which for her is tolerably healthy, malt liquor, vulgar and dangerous to the complexion. What wonder that she takes the only “support” which seems satisfactory, strong, loaded wine, or poisonous tartarised light liquors, and half unconsciously repeats the dose three or even four times a day, a mistake no man, unless

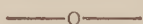
very far gone indeed, ever attempts. Men, unless they are drunkards, never drink more than twice, and very seldom more than once a day. Considering how rapid the stimulant is in action, how greatly it increases for the moment with women the apparent intellectual power, and how completely the sense of weariness disappears under its influence, the wonder is not that the habit should prevail, but that it should be limited to so very few. Just let a *Saturday* reviewer try to talk pleasantly, and if possible fascinatingly, to an infinite succession of people for eleven hours a day for four months on a stretch, and then see what he would do, or abstain from doing, to get a little relief. It is of no use to say the doctors are to blame. No doubt, disease having assumed a low type, and nervous disease tending to become as common as "a full habit" was common once, doctors are tempted to recommend alcohol as a stimulant, and do recommend it carelessly; but their advice would be disregarded, just as their advice to swallow assafoetida pills is disregarded, did not their patients feel that it exactly met their case,—that, in fact, it was very pleasant advice. Women never learn to like alcohol for its flavour, or they would be as particular as men are about the form in which it is conveyed, and they take it only because they feel that the dangerous "whip" is the only one which meets their special necessity. It is ruin for them, as it is for men, and in both cases for the same reason, because any narcotising poison once in possession of the system paralyses the will; but it is ruin far quicker, and, owing to the organisation of society, more complete. We are not inclined to believe what the *Saturday* says and the *Practitioner* hints, that liquor impairs chastity in women more than in men; but women depend upon the will, which the influence of the poison cripples, and suffer more visibly when its paralysis has thrown them back defenceless upon impulse, whether the impulse be kleptomania or concession to solicitations.

Why say all this? First, because

it is true, and the world gains by any kind of truth the statement of which does to tend to increase the evil, as happens in the case of at least two forms of evil, lust and cruelty; and secondly, because we believe it possible for the profession which has partly caused and now fears the evil to help society to the remedy. It may do much by private advice, more by diffusing or helping laymen to diffuse, a little ordinary knowledge. For instance, it could very easily indeed do one most important service—prohibit altogether, as the *Lancet* has in over-reticent phrase advised, the use of alcohol by girls under twenty-one. They should have none, simply. If they cannot get along, they should have less work, more sleep, or, what is nearly as good, more opportunity of lethargic quiescence, and endless milk; but it should be "good form" for them to be absolute teetotalers. They do not care in the least for the flavour of wine. They, like the Madrassees, "no drinkee for drinkee, but drinkee for drunkee"—that is, for the sake of the stimulating effect, and they should be compelled by household opinion to go without altogether. It is nonsense to say this could not be effected. Fifty forms of restraint much more irksome than this are borne by girls without flinching, or, indeed, perceiving that there is any restraint to flinch from. The doctors circulate through society a dozen rules of different kinds for the management of children, girls, everybody who is managed, about which nobody talks, but which are never disobeyed; and they could add this one, as the *Lancet* advises, if they liked. Then let them teach everybody a little more truth about diet—the reason, for instance, why large doses of tea swallowed by sedentary men, or by women, predispose them to think that they want "support." How many people are aware of the extraordinarily pernicious effect of tea—in itself the pleasantest and least hurtful of all stimulants—upon some temperaments, and especially upon the more "highly-strung" organisations—organisations with a tendency to neuralgia, irritability, or

"the fidgets"? Or let the physicians tell the public, as the *Practitioner* of this month does so clearly, the point at which, by the consent of all physiologists, alcohol ceases to yield force, and becomes a narcotic poison to the nervous system—a poison, that is, which takes the edge off the intellect, weakens the will, and makes the muscles tend to tremble. The statement certainly came on us, who probably know more of the matter than most women, with a distinct shock of surprise; and we reproduce it textually as by far the most beneficial statement yet made on the subject by good authority:—"In former papers, in this journal and elsewhere, we have shown that  $1\frac{1}{2}$  ounce of absolute alcohol, or two in the case of unusual exercise of body or mind, is about the maximum standard for the allowance of adult men; and the recent researches of Dr. Parkes confirm this belief, at least so far as showing that indubitably evil results follow when it is considerably exceeded. If such a quantity be the proper allowance for a man weighing 160 lbs. (mostly bone and muscle) and always engaged in powerfully exerting either his muscles or his brain, or both, it would surely seem reasonable to say that a woman, weighing say 120 lbs. (much of it fat), and hardly ever using her muscles or her brain vigorously and continuously, ought, at the outside, not to exceed the daily quantum of  $\frac{3}{4}$  ounce absolute alcohol, which would represent about two ordinary glasses (two ounces each) of the usual highly fortified sherry or port which ladies prefer";—two such glasses in the whole day mind, or say, to put the matter in a still more intelligible form, one glass of port or one fair tumbler of Bass at each of the principal meals, any quantity beyond that being mere

injury, as much injury as a slight nervous shock per diem would produce. That statement, if confirmed, as, according to the *Practitioner*, it would be by all considerable physiologists, is by far the most important piece of information communicated during the struggle about the effects of alcohol, and, whatever the doctors may think, is entirely unknown to the mass of English mankind. We now want one bit more, which perhaps the *Lancet* can give us, and which would be almost equally valuable. Does there exist, or can there exist, any drug, form of diet, or method of training, which will enable weak frames to get through extra work as alcohol does?—which will prevent the nervous depression incidental to modern life, without so rapidly exhausting nervous energy? Sleep, we know, would give the requisite strength, and we are half inclined to believe that the popular notions about sleep are the cause of much mischief, that the regular seven hours is the proper stint for a milk-maid, not for an overworked London woman. But is there nothing besides sleep—even if sleep were attainable—no truth, for example, in the profound Hindoo faith in the strengthening quality of milk or other digestible form of food? We do not say there is, we do not know; but we do know that if there is none and London life keeps up its pace, drinking among the nervous will continue. And finally, let the doctors make known clearly the external symptoms of permanent alcoholisation, so that every man or woman who drinks may enter society sure of immediate detection. If everybody could recognise at a glance the signs of addiction to alcohol, its use would be at once pronounced bad tone.



## SUBSTITUTES FOR ALCOHOL.

IN a very interesting paper on "Women and Alcohol," the *Spectator* discusses the recent article on

feminine intemperance which appeared in the *Lancet*, and winds up with an appeal to us to answer an exceed-

ingly practical question. We are asked to say whether there is any drug, or any modified plan of diet, which will enable persons who are necessarily subjected to the strain of life in London society, entailing as it does an insufficient amount of sleep, to dispense with the use of alcohol at night. The question is a serious one, but the only honest reply must be an almost unconditional negative. There is no drug known that has any such power, if we except the Peruvian *coca* as to which, after all, the accounts are exceedingly conflicting. The problem being to get an utterly abnormal amount of work out of the human muscular and nervous systems, one would say, *à priori*, that it was a question of nutrition; and, in fact, there can be little doubt that the immense superiority of alcohol to all mere stimulant drugs, in supplying extra force, is because it is (up to certain somewhat variable doses) an easily oxidisable hydrocarbon. The readers of the *Lancet* do not need to be told, however, that we entirely object to the employment of alcohol for these extra spurts; at any rate it is most dangerous to encourage the mixed multitude, especially the women, to rely on this support. Under these circumstances, we fear that there is little hope of checking that variety of alcoholic intemperance which springs from excessive night fatigue, undergone by delicate and nervous persons, unless London society were to take the strong step of introducing a radical change in the hours of evening entertainments. Most devoutly do we wish that such a thing were possible, and we will hope against hope that we may live to see it done. Meantime there is just one consideration, touched upon, indeed, by the *Spectator*, which affords a chance of some limited protection against the evils entailed by our foolish social customs. Although it is impossible for girls to digest such large and heavy late evening meals as would alone afford force sufficient to support them uninjured under the abnormal fatigue of fashionable evening amusements, something

might well be done in the direction of improved nutrition. Milk forms the basis of a number of modern semi-farinaceous dishes, which a clever cook can flavour with endless variety; and we believe it might be not impossible to gradually introduce the custom of eating these in considerable quantity at other times than those of the meals, without any alcoholic accompaniment. But, at any rate, let there be no misunderstanding about one thing: *force cannot be had without nutritive material*. It is for the respectable matrons of Belgravia to say which of three courses they prefer to take: they can, if they please, reduce the strain which they at present throw upon their daughters' energies, and enable them to live in the way which is alone physiologically suited, or æsthetically appropriate, to healthy maidens—viz. with little or no alcohol; or they can educate the young ladies to eat a great deal more food than they do at present; or they may continue the present state of things, which involves an inevitable and not very small percentage of such excess as suffices, at least, to rob female life of its poetry, its enthusiasm, and its refining influence over mankind. Such is the choice presented to the mothers of our immaculate British society; but, to say truth, we fear that these magnificent dames care little about the whole affair.—*Lancet*, Feb. 25.

[The question put to the *Lancet* was, whether there is any drug or system of diet which will enable persons who have to encounter the strains of London life to dispense with the use of alcohol at night? The *Lancet* gives an unconditional negative. And as far as any *drug* is concerned, we must give the same answer. For although opium, or hydrate of chloral, or ether, or chloroform, can all narcotise as well as alcohol, the use of these would keep up that unnatural condition of the nervous system which renders alcohol apparently necessary to persons who are in the habit of using that poison. But although we do not think that any *drug* would enable persons to "dispense with the use of alcohol at

night," we are convinced that a rational system of diet and a good supply of real food would not only enable persons to dispense with the use of alcohol at night, but enable them to dispense with its use under all circumstances. It is from food and not from narcotics that force is to be obtained, and the best substitutes for alcohol are

wholesome, nutritive articles of diet. This is partially recognised by the *Lancet*, which says, "Let there be no misunderstanding about one thing—*force cannot be had without nutritive material.*" The italics are the *Lancet's*, and the principle enunciated is highly important.]



### THE CONDITION OF LIVERPOOL HOUSES.

It is difficult, if not impossible, to convey a true idea of Liverpool interiors. The houses are often occupied from cellar to roof by families in every room. In the cellar those wretched creatures hide for shelter who are unable to pay for lodging elsewhere. They lie upon the damp floor, often without covering of any kind, or fire, or light. There are 25,000 empty cellars from which they may select their lodging, and, when driven out of one, they readily find another, with or without the connivance of the tenant of the house. Notices to quit were served last year on 3,274 of the inhabitants of illegally occupied cellars. Fines are useless, imprisonment is vain; for there is a form of poverty which can neither be coaxed nor coerced. But there are, also, upwards of 6,000 cellars which are occupied by permission of the law. These are selected according to certain rules, which admit, however, of very large exceptions. In a street of fifty houses, only a single cellar was found licensed for occupation, not because it was better than the rest, but simply because it had been occupied for thirty years by an aged married couple, and was admirably kept. Dr. Trench wisely recognises the fact that good habits will overcome all difficulties and mitigate all structural defects. But, ordinarily, the occupants of cellars are in a wretched state. Many of them have neither bedsteads nor bedding. They sleep on the floor beside the drain in the corner of the

room. They belong to the very lowest class of labourers—men whose average earnings do not amount to more than 10s. a week, the half of which is spent in drink. Here, too, is to be found the widow whose husband succumbed to typhus fever six years ago, leaving his four little children to starve on her labour and the parish allowance of half-a-crown a week. What wonder that the eldest boy can only earn 5s 6d. a week, although he is seventeen years of age! that the second is a cripple; that the younger ones are starving and in rags; that she owes the landlord nearly £1 for rent of the wretched hole she lives in; and that relapsing fever should attack them all? But bad as are the cellars, the state of things grows even worse as we mount the house from room to room, until the climax is found in the attics, where there is neither fireplace nor ventilator to let out the fetid air. Here, at night, drunkenness and dirt, wretchedness and rags, beggar description. It has been officially ascertained that more than half the inmates of the sublet houses are habitual drunkards. And yet they do not appear to be drunkards of an ordinary type. It is not for pleasure or excitement that these people drink: it is for very life. The pestilential atmosphere depresses the nerves and rapidly destroys the appetite. It is upon drink they are compelled to work. Drink is their clothing, drink their only comfort; and but for drink they most assuredly would die like

their children. Alcohol is the only antidote to the compound ethereal essence of nastiness they are compelled to breathe. The air is redolent of damp foundations, broken sewers, and human ordure. It is polluted with odours of filthy persons, foul rags, and stinking fish. The very walls exhale a stench of vermin and contagion, which whitewash hides for a day or two, but does not in effect remove; and the visitor unaccustomed to the depressing influence is compelled by repeated attacks of sickness to retire. In not one room in ten is there a bedstead; in not one a wholesome bed. The inmates sleep, or rather lie, upon the floor, from which they are separated by a bit of straw or a bundle of dirty rags. Not one in twenty takes off either boots or clothes. The drunken slumber off their drink; the sober lie restless and awake. Restoring rest there is none. Mothers and sons, fathers and daughters, brothers and sisters, relations and strangers of both sexes lie indiscriminately together, many of them all but naked, locked in each other's arms for warmth. And rags are everywhere; on the people, on the floor, on the scanty bench or broken box, on lines above the head and on nails upon the wall, on chairs before the fire when there is one; in all stages of decay, in all degrees of filth. And dirt, black and fetid, is on the floor, the walls, the ceiling, and the persons of the inmates. Foul and dishevelled is the hair and grimy are the faces; for there are no wash-basins, no hair-brushes, rarely a broken comb. The water is kept outside to wash the cress, vegetables, and fish, which, after being steeped in the poisoned atmosphere throughout the night, will be sold to their betters and converted into drink. This is a true but feeble picture of thousands of houses in Liverpool; and they are used chiefly to pass away the time between the closing of the public-house at night and its opening in the morning. What

wonder is it that the children die, the young droop, and the adults drink?—*Lancet*, Dec. 24, 1870.

The Liverpool Correspondent of the *Medical Times and Gazette*, writing on February 28, says:—"Some facts illustrative of the social habits of the Liverpool poor were related by Dr. Trench, at a meeting of the Health Committee, on Thursday last, which must surely lessen the surprise of those who have been in the habit of wondering at our continued unhealthiness. In a cellar in Prince Edwin Street, where a child had died of smallpox, the mother, an infant, and a son ten years old, slept in the same bed with the corpse. In Chisenhale Street, a woman died of smallpox on February 14. On the 17th, when the house was visited by the inspectors, it was found to contain more than a dozen persons, engaged in holding a wake over the deceased, all of them under the influence of drink, and two of the women so drunk as to require to be carried away. A child died of smallpox, in Gildart's Gardens, on February 18th. The father, mother, grandmother, and little brother of the dead child lived by day and slept by night in the same room with the corpse; and, as if this was not enough, a wake was held on the 20th; and it was only on the 21st, and that not until application had been made for a magistrate's order, that burial was proceeded with. Wakes are very common, the close, ill-ventilated room or cellar, where the corpse lies being the scene of a constant succession of visitors from the moment of death to that of burial. One case stood out as pre-eminently disgusting. A child died of smallpox on February 16. On the day following, the mother, during her husband's absence, took the corpse from the bed, laid it on a table, and then carried the sheets and blankets, just as they were, to a neighbouring pawnshop."

## DR. ANSTIE'S DEFINITION OF MODERATION.

TEMPERANCE advocates have often asserted that no one has ever given a definition of what constitutes the moderate use of alcohol. They say that men and women differ so much in their power to withstand the action of narcotics, that the quantity which might be taken by one person without any apparent evil effects would be an intoxicating dose to another, and that even the same persons are more susceptible to the action of alcohol at one time than at others. There is evidently great difficulty in attempting to fix the limits where moderation ends and where excess begins. But the attempt has been made. Dr. Anstie, who has paid great attention to the question of the use of alcohol, has stated in the *Practitioner* and elsewhere, "that one and a half ounce of absolute alcohol, or two in the case of unusual exertion of body or mind, is about the maximum standard for the allowance of adult men," and he says, "If such a quantity be the proper allowance for a man weighing 160 lbs. (mostly bone and muscle), and always engaged in powerfully exerting either his muscle or his brain, or both, it would surely seem reasonable to say that a woman weighing 120 lbs. (much of it fat), and hardly ever using either her muscles or her brain vigorously and continuously, ought at the outside not to exceed the daily quantum of three-fourths of an ounce of absolute alcohol, which would represent about two ordinary glasses (two ounces each) of the usual highly fortified sherry or port which ladies prefer." This is the nearest approach that we have ever met to a definition of the moderate use of alcohol, namely, not more than two ounces of alcohol in twenty-four hours for an adult man, and not more than three-fourths of an ounce for a woman. If this be accepted as the moderate use of alcohol, a large part of the community must be pronounced guilty of excess. The number of persons who restrict themselves to the quantity indicated by Dr. Anstie is very small, and in all social gatherings where alcohol is used, the limits of moderation are easily passed. It would

be a sad interruption to the enjoyment of a convivial party if Dr. Anstie's standard of moderation were set up for its guidance. There would be, in the first place, the necessity of learning the amount of alcohol contained in the wine or other inebriating liquor placed before the guests; and the size of the glasses would have to be made known, so that each person might understand how many glasses he or she might take without going beyond the bounds of moderation. And then, in the second place, there would be great difficulty in keeping to the right number of glasses. For alcohol, when taken into the stomach, so affects the nerves and brain as to make persons feel anxious for more of it. This constitutes its most dangerous property. It exhilarates, and it creates an alcoholic appetite which grows stronger by indulgence. It would be extremely difficult to keep to the standard. In fact, to propose to restrict or point out the quantity of alcoholic liquor which may be safely used, would be to acknowledge that the drink is, as the teetotalers assert, highly dangerous. It would be to make a distinction between alcoholic liquors and all the other articles of food or drink that we use. The admirers of the liquors would naturally revolt at the idea of fixing a very narrow limit to the consumption of what they profess to consider the good creatures of God. We dispute the utility of attempts to set bounds to the consumption of brain-poisoning drinks. Moderation may be theoretically right, but it is ever proving practically wrong. All the victims of intemperance began their use of strong drink in moderate quantities, and the drink has made them what they are. The drink is truly a mocker; men flatter themselves that they know how to guide themselves—they can distinguish the use from the abuse; but they learn by painful experience that the drink is strong, while men are weak.—*Temperance Record*.

## Notes and Extracts.

THE AMERICAN DOCTORS. — Dr. N. S. Davis, of Chicago, in a public speech, recently stated that out of 400 physicians in Chicago, there were at least 100 who used no liquor as medicine, and the number was daily increasing.

ACTION OF ALCOHOL. — Dr. Heinrich Timmerberg ("Inaug. Dissertation," Dorpat, 1869) found, as the results of his investigations and experiments on animals:—1. That alcohol constantly lowers the bodily temperature. 2. That it lessens the frequency of the heart's contractions. 3. That the blood pressure in the carotids is lowered, indicating diminished force in the cardiac action, and that this effect was produced partly by direct action on the heart, and partly through the vagus nerve. The retardation of regressive metamorphosis by means of alcohol is to be ascribed to the weakening of the heart's action, as well as to direct influence on the blood.—*The Doctor*, Jan., 1871.

SOLUTION OF AMMONIA IN DELIRIUM TREMENS. — The efficacy of ammonia in drunkenness naturally suggests its employment in delirium tremens, which is only a prolonged attack of drunkenness, and it has recently been employed with good effects in heroic doses by Dr. Gouamier. One of his cases was a robust man, forty-five years of age, whose limbs were in a constant state of agitation, with sleeplessness and a sub-delirious state. Dr. Gouamier prescribed an ounce of strong infusion of valerian root, and thirty drops of solution of ammonia, edulcorated with simple syrup, to be taken every two hours; after five doses, sleep supervened, and the agitation of the limbs was effectually cured.—*Gazetta Med. Lomb. et L'Imparziale*, Jan. 1, 1871.

HABITUAL DRUNKARDS. — In the House of Commons, on February 14, Mr. Dalrymple, in moving for leave to bring in a bill to amend the law of lunacy, and to provide for the management of habitual drunkards, said the measure differed in a very slight degree from the one he proposed last year; and that difference was caused by the desire to surround the liberty of the subject with somewhat greater safeguards. As the Government did not object to the introduction of the bill he would not now detain the House with any observations further than to remark that he trusted that the hilarity with which the notice he gave of the measure was met on Thursday last, would vanish when the gravity of the subject came to be considered by the House. The hon. member concluded by moving for leave to bring in the bill, which was granted him, and the second reading was fixed for Wednesday, 29th March.

HOW TO LIVE 200 YEARS. — Old Parr's famous life pills have been completely put into the shade by a recent and extremely simple means employed, it is affirmed, by Chinese doctors to prolong human life. A certain Dr. M'Gowan states that China women's milk possesses certain extraordinary qualities whereby the vital flame is nourished, and the continual waste of that subtle essence, which constitutes the life of the soul, is greatly checked. In support of his theory he intimates the case of a wealthy Mandarin who employed 100 nursing women to supply him with the necessary nourishment, the consequence of which is that he has now attained his 200th year, and is "as round and plump as a squash." Another who fed on the same lacteal secretion attained the extraordinary age of 240 years; and Dr. M'Gowan

expresses his belief that by using the same means any ordinary healthy man who takes care and steers clear of accidents may attain the age of 200 years and have something to spare.

THE RED RIVER EXPEDITION.—In the House of Commons, on Feb. 16, Mr. Cardwell, in his speech on army reform, said:—"One incident of the year I think it right to mention. Amid so many great events the expedition which was sent to the Red River, in consequence of an insurrection in the territory, has been almost entirely lost sight of. It is due to those who took part in that expedition that they should have the credit of it. It involved a journey of 600 miles over a forest never hitherto traversed by a military force, and the intervening obstacles were of the most serious kind. But all the difficulties were successfully overcome, and the troops having accomplished their object returned immediately to Canada, there being a total absence of crime and of sickness, every arrangement having previously been made to meet every difficulty. My hon. friend, the worthy baronet the member for Carlisle, will rejoice to know that one of the reasons of this happy state of affairs was that spirits formed no part of the daily ration, and no intoxicating liquors were obtainable in that inhospitable country."

THE "LANCET" ON ALCOHOL IN HEALTH AND DISEASE.—In its annual review of the progress of medicine during the year 1870, the *Lancet* (December 31) says:—"The use of alcohol in health and disease is one of the most important questions that can engage the attention of our profession. Dr. Parkes and Count Cyprian Wollowicz, M.D., assistant-surgeon of the Army medical staff, reported experiments on the effects of alcohol and on the effects of claret, in separate papers, to the Royal Society. These experiments, it is right to say, were made on one man, and he a man capable of health without the assistance of alcohol even in trying circumstances. Still, making

all allowances, they were very valuable contributions to a scientific view of this subject, and they went to show that little more than two ounces of alcohol produced undesirable effects—lessened the appetite, depressed the nervous system, and quickened the pulse. We ourselves, in our editorial columns, have directed attention to the prevalent doctrines of debility and its treatment. Dr. Wilks, in a letter in an early number of the last volume of the *Lancet*, delivered his views on alcoholic stimulation in disease; and in a later number some very pertinent remarks by Sir William Jenner on the use of stimulants in typhoid will be found. Mr. Gay, in his opening address as President of the Medical Society, expressed his disapproval of the large administration of alcoholic stimulants in disease. We dwell upon this subject the rather for two reasons—first, its extreme importance; and secondly, because we have never lost sight of it, or held any extreme views. When it was the fashion to intoxicate pyrexial patients, we were not led away by it; and now that a most commendable care in regard to the practice is setting in, and physiologists and physicians are seeing their way to the advantage of well-defined quantities, we can only be gratified at the confirmation of views which have all along been expressed by us, and at the prospect in health and disease of a more careful use of alcohol. In the American war the issue of a spirit ration to the soldiers of McClellan's army was discontinued upon the advice of the medical officers, without any apparent injury to the men. We have recently remarked on the fact that not a ration of rum or spirit is served out to the German soldiers. They are performing their prodigies of victory and of endurance on simple, nitrogenous food, and a bottle of light wine a day, containing an ounce and a half or two ounces of alcohol—the quantity which Dr. Parkes, Dr. Anstie, and other observers, would agree in thinking the amount which can be taken without producing more or less of narcotic effect."

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Original Contributions.

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THE DEGENERACY OF RACES AND THE DECLINE  
OF NATIONS.

A STERN and impressive lesson has been taught to the world by the recent events in Paris. In July, 1870, Napoleon the Third declared war against Germany, an act which excited alarm and indignation among thoughtful men, and the general feeling was well expressed by the *Times* newspaper, denouncing it as a great crime against civilisation. The declaration of war was at that time judged to be the act of the Emperor in furtherance of a sinister policy, in which, as it was alleged, he was sustained by the upholders and flatterers of Imperialism. The Emperor has since stated, and the events of the war have done much to give a colour to the statement, that he had been hurried into it by a spirit that had become irresistible—a spirit pervading the French people. There were, no doubt, large numbers of the Parisian population who, prompted by the national vanity, a love of glory, or even by worse motives, were eager for war, and they overwhelmed the larger number who desired peace and dreaded change. In large cities there is always resident a number of men without regular pursuits, or habits of industry, who live upon the vices of the community, and to whom convulsions and revolutions promise the only chances of profit or advancement. Paris, more than any European capital, has been the common centre where restless, ambitious, and adventurous men have gathered from all parts of the world. They are often men of education, having in their career learnt something of the art of war, and have talents and address enough to assume a manner most likely to impose upon the facile minds of the multitude. Such men as we describe are the offspring, and become in the end the scourges, of a corrupt civilisa-

tion. Whatever might be the causes leading to the war the crime brought a fearful retribution, as it has led to the utter humiliation of France. In less than a year a series of events have taken place unprecedented in history. The most powerful of her armies, led by the best of her generals, after sustaining signal defeats, became prisoners, and the strongest of her fortified cities had to surrender. Paris was surrounded by the enemy she had provoked, and, after sustaining for weeks the horrors of famine, had also to surrender. When peace became a necessity, then civil war followed. A body of desperate men hoisted the Republican flag, obtained possession of Paris, and under their rule atrocities have been committed equalled only in modern history by those which stained the early stages of the revolution of 1789. The insurgents were at length defeated by the armies of France, and have been hunted down, slaughtered, and dispersed with an indiscriminate vengeance. The following description is taken from the *Times* of May 20:—

“ So far as we can recollect, there has been nothing like it in history. The siege of Jerusalem may afford some parallel, but Roman soldiers never so utterly lost their self-control as the Versailles troops appear to have done. Our correspondents are beggared for words to describe the scene, and exclaim that it is hell upon earth. It is nothing less. There are all the physical and all the moral accessories. Fire and brimstone, storm and tempest, torture, insult, hatred, despair, all forms of malice, murder, and destruction, have been raging in Paris during the last few days. Women forgetting their sex and their gentleness to commit assassination, to poison soldiers, to burn and to slay; little children converted into demons of destruction, and dropping petroleum into the areas of houses; soldiers in turn forgetting all distinctions of sex or age, and shooting down prisoners like vermin, now by scores and now by hundreds—all combine to enact, on civilised ground, and within the sight and hearing of their fellow-men, scenes which find a parallel only in the infernal regions imagined by prophets and poets. This is what human nature is capable of; for Frenchmen are men, and we shudder for our race. But, at all events, what hope is to be seen for France in this seething abyss? This tragedy is the end of eighty years of revolutions, of an eighty years' struggle after Liberty and Fraternity, eighty years of attempts again and again renewed to rebuild French society on a new and harmonious basis. The end is a fiercer hatred, deeper divisions, wilder passions, and more eternal distrust. Will these six days of savage devastation tend to heal the existing breach between the lower and the middle classes of France? Will the mutual slaughter of soldiers and citizens tend towards that essential condition of a happy State—mutual confidence between the army and the people? Will the blood of another archbishop sow the seeds of peace between the priests and their Socialist foes? That which we seem at present to see in this outbreak of hell is the permanent creation of yawning abysses between classes, institutions, memories, and men. Paris may, perhaps, be rebuilt; but what is to wipe out the blood with which every street in Paris is now stained? and when will women cease to hand down to their children the envenomed hatreds of May, 1871?”

It is not within our province to inquire into the causes of the war, which in the short space of a year has brought such calamities upon France. The historical student will have to go much

further back than the commencement of the eighty years to which the writer in the *Times* refers; and in making that research he will find that the first revolution was the natural result of a long reign of misrule on the part of the governing classes. There was corruption equally among both priests and nobles, and intense suffering on the part of the people. The profligacy of the higher classes brought ruin upon themselves and their country. While the court revelled in the worst excesses, the industrial classes were impoverished, and the trades upon which they sought to live were paralysed. The people were, moreover, wantonly spurned and injured. The separation of class from class was complete. The hatred which always rankles in the hearts of the abject and ill-used, against the haughty and the proud, turned men into savages. The despised rabble became in turn the despoilers of their oppressors. So it has been in all times. The moral law of God ever vindicates itself; it must be obeyed, or the punishment due to disobedience will follow. There is no escape. The Gospel had been dishonoured by the men whose duty it was to teach it; and the multitude, to whom it was a sealed book, read it only in the lives of the priesthood, and in the ceremonies of the Church. A dark reign of no-gospel followed. The masses of the people—plundered, abused, and insulted—seeing what the Christian religion had become, rejected Christianity. In looking over the dark deeds of the Revolution, which, beginning in 1789, has not worked itself to an end, the observer will apply the language of Father Hyacinthe, who, in speaking of what has recently taken place in Paris, says, “Behold the work of a people which no longer knows God.”

In all the various changes which have followed in France during the present century, there has been nothing to give assurance of stability. We have learned from these changes that no form of government, no written constitution, can give freedom to a people, or security to the institutions of a country. A people must grow into freedom, and the institutions must grow with that freedom. Among a people ignorant and vicious, programmes of liberty, equality, and fraternity, become the idlest and the most delusive of empty forms. That which in all ages has undermined the strength of States has been at work in France under her governments, whether acknowledging at the head a president, a king, or an emperor—that is, a deep-seated and widespread demoralisation. Peculation has run riot in the public departments, lasciviousness has reigned in her palaces. Her legalised prostitution is an index to her laws and to her manners. Paris became the city of pleasure—sensual, obscene pleasure; known as such, and attractive as such to the vicious and sensually-disposed of all countries. The aid of the arts was

brought in to embellish the voluptuousness that gave a bad pre-eminence to that city above all the cities of Europe. The following passage, from *La Liberté*, of May 29, gives eloquent expression to a warning to which it will be well for all men to listen :—

“ Formerly, at the very moment when a king of France breathed his last, a herald used to advance to the threshold of the chamber of death, and, in the presence of the whole Royal Family, he used to cry, ‘ The King is dead ! Long live the King ! ’ On the smoking ruins of Paris we gave up the first hours to tears ; let us now take courage, and, turning our eyes to the future, let us cry, ‘ Paris is dead ! Long live Paris ! ’ Paris is dead ! We now know the full extent of our misfortunes ; a band of scoundrels, recruited from amongst the refuse of all nations, has fallen upon the capital of France, torn from it its time-honoured crown of monuments, and left it covered with wounds, and dying. Its streets are deserted, its squares strewn with corpses, its temples desecrated, streams of blood flow everywhere. Its public buildings have been burnt, its finest quarters demolished ; the wind carries away in dust the ruins of its palaces ; everywhere there is the image of desolation and death ! Is this all ? No ; it would be denying the light of the sun, to see in this horrible catastrophe nothing but massacre and conflagration. It is the end of a world, the end of a civilisation ! It is the end of a world and of a civilisation which have been powerless against the German invasion, powerless against the insurrection ! It is the end of an egotistic world, of a corrupting civilisation ! It is the end of a world which felt so little interest in public affairs as to give up the destinies of the country into the hands of one man without any effectual control ; which placed the highest object of its activity and life in material enjoyment ; it is the end of a civilisation which could only satisfy the grosser appetites. . . . It is the end of the disgraceful part played by Paris in the world—Paris, which assumed the lofty name of capital of civilised nations, and which was only their brothel—their vast school of immorality. Long live Paris ! A new era is beginning. To those who are kings and princes in debauchery, and to the nation also, we will say, ‘ Go your way ! Our ruins can no longer be the rendezvous of the carnival of Europe ! ’ We know by our experience of invasion and insurrection where these salaried rulers to whom nations are so willing to entrust the care of their affairs lead us. The time has come for us to manage our own affairs. The haughty *bourgeoisie*, who shut themselves up in the privileges of their wealth, and would not condescend to discuss their rights with the working classes, and to teach them their interests, have learned what it costs to give them up defenceless to the allurements of demagogues. The example set by those in high position of fortunes rapidly made by shameless speculation, spread in the lower strata of society disgust of labour, and encouraged robbery. The hard times which are coming will give wealth only to hard and incessant labour ; and the undeserved and ill-gained fortunes of the great will no longer have as their consequence the idle and dishonest greed of the small. We shall have to toil hard in order to extract from our fallow fields, from our ruined manufactures and our wasted commerce, the milliards due to Prussia, and the money for the restoration of our ruined capital. But labour purifies the mind and strengthens the body ; and God grant that we may not restore our monuments till we have reformed our morals ! The enemy to be feared to-day and to-morrow is despair ! Let us beware of it ! . . . Let us have faith and courage ! Paris is dead ! Long live Paris ! ”

This is a noble passage. It breathes both indignation and grief, chastened by a feeling of sanguine hope. The writer points to the great cause of the fall of France, and to the only

means by which she can become regenerate. There is no foundation for solid greatness but that which rests upon the moral law of God. There is no true life but that which subordinates the animal to the spiritual. Men cannot serve God and Mammon, and Mammon has been a deceiver and a liar from the beginning.

We dwell upon this while the events, and the depression they have occasioned, are weighing heavily upon men's minds, and it is an appropriate introduction to the subject before us. In the contemplation of so sad a picture is it not well, nay, does it not become a duty, to look at the state of our own country, and ask whither we are tending? Is there nothing in the state of society in England to cause serious thought, nothing in our manners or morals to indicate peril or decline? The question is not whether we are in a similar condition to that in which the late war found France, but whether the causes have not taken root which inevitably result in national enervation and debility. The question has often been put whether Great Britain has not already reached the meridian of her power and greatness, and whether, in obedience to a natural law, she is not in the first stage of decline. In 1848 Ledru Rollin emphatically pronounced her doom; but while looking from a distance upon our country, and with a very imperfect vision, he seemed almost wholly blind to what was moving beneath the surface in his own. Nevertheless he pointed to several of the blotches and foul sores, which are only too apparent in our social system, and which are threatening enough. They are the results of a civilisation where the intellectual progress has greatly outstripped the moral; and where everything has been subordinated, if not sacrificed, to secure a mere material prosperity. It would be easy to point to the reckless spirit of speculation—the commercial greed—the passion for display and worthless distinction, as proofs of degeneracy in our morals. Bad as these things are, there are much worse beneath. While fashion is leading its votaries into folly and extravagance, and a gambling spirit of speculation is bringing thousands to ruin, there are growing along with them poverty and discontent—pauperism, and its concomitants, idleness, ignorance, and vice—an increasing number of those who without steady or useful pursuits live upon the industry of others—the several elements of a dangerous class, the existence of which constitutes the greatest danger to a community.

The worst feature perhaps is that the lookers-on, those who live in the midst of the evils, are insensible to their existence, or greatly underrate them, and entirely mistake the causes which produce them. One of the publicists of France has been lately ascribing the development of the wild passions which have produced such fearful atrocities to atmospheric or miasmatic influences.

Such speculations are scarcely more extravagant or absurd than many of the theories which abound among us, and which are strained to account for the crime and pauperism prevailing in England. The passions were the growth of debauchery, of long-continued incontinence, and nameless immoralities. When treatment is determined by an imperfect diagnosis and is confined to the symptoms of a disease, the malignancy of the disease is generally increased, and the future cure rendered much more difficult, if not impossible.

The true causes of our national vices are not understood in the councils of the nation; and when the blind lead the blind, no wonder that both fall into the ditch.

The physical and the moral laws are indissolubly connected. This is the ordination of Divine wisdom. A sound body is indispensable to a sound mind. Dupatey says, "Philosophy is in the wrong not to descend into the physical man, there it is where the moral man is concealed." A sober and well-regulated life is essential to the proper discharge of duty, and the enjoyment of true happiness. A well-balanced mind is not possible where the appetites are falsely and improperly indulged. It does not occur to the ordinary observer that very much of the sour tempers and bitter animosities of life have their origin in ill-health; but so it is. An attack of toothache may teach a man how much pain has to do with disordered views of things, and an exaggerated or distorted sense of duty or obligation. What is true of the individual man is true of men in the aggregate. "Nature herself forbids," says James Mill, the father of the economist, J. S. Mill, "that you should raise a moral and self-relying people out of an indigent and suffering population." France has seen her capital despoiled, and her children exposed to all the horrors of war, from causes arising out of the false and depraved indulgence to which the people have given themselves up. The conduct of the war has shown, and scientific investigations have proved, that her population, especially that of her cities, have become physically deteriorated, and moral deterioration follows with the same certainty as the night the day. Are not the same causes in operation among us? We have not reached the refinements in sensuality and vice, nor has the disregard of family become so general, but the melancholy disclosures made day by day through the press show that there is an undercurrent of vice which imperils our character and safety as a people. It would take us far beyond our limits to enter into all the questions which the above statements suggest, but we may single out that which stands first and foremost among evil practices—that which is connected with every form of vice and with the worst kinds of depravity, and which, in the majority of cases, is found to be the

originating cause of each. We refer to the general habit of drinking. We think it necessary to say, that we do not speak of intemperance as it is generally understood and spoken of; we refer to the habit of drinking—drinking not ending in drunkenness, nor conspicuous excess, but effecting far more ruinous consequences upon the constitution than occasional inebriety. The public press has been loud upon some features of this drinking. We have heard of *Drawing-room Drinking* and of *Counting-house Alcoholism*. We have listened to much declamation on the subject of ladies drinking at home and abroad. These prelections are very much like all modern preaching, they take a surface view of matters. It is common to condemn the offence of inebriety, but to deal lightly or omit to notice the popular delusion from whence the offence arises. They warn the drinker against drinking to excess, but they speak approvingly of the drink, and end by recommending moderation or care in the use of alcohol, without defining the line between moderation and excess, and never by any chance do they suggest the inquiry whether the article alcohol is not an evil thing in itself, and whether the true security does not rest in the abandonment of it altogether as a beverage.

There can be no doubt that drinking is tending more to the deterioration of our population than any other cause, or than all other causes put together. The inducements for men and women to resort to drink are becoming more and more numerous and more powerful as our habits become more artificial. Wealth is increasing, and wealth gives leisure to those who possess it; but that leisure which ought to be devoted to ennobling or patriotic pursuits, is often expended upon frivolous or vicious amusements. Periods of excitement are succeeded by intervals of distressing ennui. Drink is called in to relieve the depression. Ladies are more and more relieving themselves of the household and other grave duties, in which their grandmothers found employment and pleasure. They haunt pantheons, picture galleries, bazaars, promenades, and the weariness arising from this life of busy idleness is relieved by the glass of wine, which, thanks to Mr. Gladstone, can now be obtained at any confectioner's with the same facility as a cup of coffee or a bun. In employments there is, with shorter hours, a greater taxation upon the mind, and in such cases the glass of wine, beer, or spirits is too often the resource. The tendencies of our civilisation are unfavourable to the growth of a truly vigorous population. Extremes often produce the like result, and extreme wealth and extreme poverty both lead to intemperance of various kinds. The love of drinking may be only one form of it, but it is that which becomes the most inveterate and the most fruitful of evil con-

sequences. The causes which lead to drinking, as we have said, are growing, and so is the indulgence in the drink. The Chancellor of the Exchequer stated in the House of Commons, that the quantity of foreign and colonial spirits consumed in 1825 was 1,317,671 gallons, in 1850 2,229,063 gallons, and in 1870-1 8,439,835 gallons, so that the consumption of 1870-1 was much greater than that of 1850. The individual consumption of home-made spirits in 1825 was .849 of a gallon, in 1850 .867, and in 1870-1 .730; and of foreign and colonial in 1825 .059, in 1850 .081, and in 1870-1 .268 of a gallon for each man, woman, and child in the country.

It is a difficult question for a finance minister to deal with. The increase may be said to show the improving prosperity of the country, and doubtless the revenue is so far benefited as to relieve the taxes upon other things, but this advantage is purchased at the expense of the health of the population. It is much more destructive than an epidemic which hastily gathers up its victims and passes away, for it is always present, swelling the bills of mortality, and impairing the physical and moral strength of the stock from which future generations have to proceed. It carries the taint to the unborn, and degeneracy and decomposition of race ensue. There is not only the vice and immorality as the immediate consequences of indulgence in drink, but the consequences are entailed upon the children and the children's children. If we take the great mass of the indigent and helplessly dependent class, it will be found that there are physical weaknesses, and an inherited debility, incapacitating them from learning or following any regular trade or pursuit; an early development of impure desires, and a proneness to indulge in mere animal gratifications. The question of repressing crime and removing pauperism resolves itself into that of improving the physical condition of the classes which give and keep up the supply. It is primarily a question of health. The pauper, the vagrant, or the mendicant, can only be looked upon as moral cripples, incapable of any steady and continued effort to provide a maintenance for themselves, and it is most unphilosophical to speak of them as responsible beings, in any strict sense, or to presume that they have had much control over the circumstances which have made them a burden and a curse to the community. Deliberative choice they really have none. They are brought into the world under the most unfavourable circumstances, and all the associations of their early homes—if it be not a mockery to call the places where the poorest classes are born, where they are educated, and where they dwell, by any name representing the decencies, comforts, or affections known to the more favoured classes—are such as confirm the worst and most vicious inclinations. Dr. Chalmers always

insisted very strongly upon the improvement of the physical condition, as the basis of moral improvement; and a very slight acquaintance with the indigent classes will satisfy the intelligent observer that it is in that direction where remedial measures must begin.

The French statisticians have, during the whole time of the second empire, given utterance to the most mournful presages as to the future of their country; and these were inspired by the growing vices of her cities, and the luxurious habits of the people. Amongst these vicious habits drinking has never been so general as it is with the English people, but it is a grave mistake to suppose that it has been so subordinate a cause of crime and debasement as is commonly asserted. Those who point to the greater sobriety of the French people, have only taken a superficial view of the state of society in the large seats of population. It is, nevertheless, the case that drinking has not assumed the same proportions as with us, although there is undoubted evidence that it is increasing. This is not material to our present purpose, as we aim only at showing that vices of any kind—flagrant violations of the laws of God—lead to decrepitude of body and mind, and inevitably to the danger and ruin of states. We have already remarked that the moralities and duties of life, in many and most important and vital particulars, are more honoured and observed amongst us than they have been amongst the French people. There is, however, the vice of drinking, and unless that be checked there can be no safety for the better interests of the country. This drinking is our danger, as it is ever at work in the production of a vicious, idle, incapable, and expensive class. When our pauperism is appealed to as a cause and evidence of danger, it is usual to reply by an appeal to the great triumphs of civilisation produced in our age, and to many other achievements of which the nation may be justly proud; but, at the time of the Paris Exhibition, might it not have been assumed that France had laid by her restless spear, had commenced a new era, and that from that time she would devote her energies to the cultivation of the arts of peace? Who could then have anticipated such a change upon the scene as that which has taken place? It is only another instance of the many recorded in history, where a brilliant career of prosperity has been suddenly arrested. Are the signs of our prosperity substantial and real? No one can reply in the affirmative when we look at the bulk of our pauperism. It will be said, that this is decreasing; but the mere fact that stringent regulations in the administration of the poor law have reduced the number of persons seeking relief, proves nothing. There can be no doubt that the numbers crowding the frontier ground—that which separates the region of pauperism from that of independent labour—are increasing. The multipli-

cation of our charities, and the demands upon them, prove this. The charities and benevolent institutions of our country ought to work to their own extinction; but, instead of this, they find the means always short of the demands upon them. The danger, then, is very much like that which has desolated some of the very fairest provinces of France, and her capital as well. The growth of a depraved class, who having no property are at war with property, who have no respect for law, or religion, or the proprieties of life. A number of causes produced this state of things in France—a number of causes are at work producing the same results here; but with us the principal one is the vice of drinking.

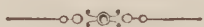
We have said that physical deterioration produces moral inaptitude and decrepitude. In discussing the various causes of *Degenerations in Man*, Dr. Elam says: "I select as the first illustration, the abuse of alcoholic liquors, as being not only most important in its bearing upon our own nation, but as offering a *resumé* of almost all other forms of degeneration at one or another period of its history." It is not our purpose at present to cite scientific evidence to support the propositions laid down by Dr. Elam, as most of it will be familiar to the reader. What must follow an increased consumption of drink is an increased and an ever-increasing deterioration of race, rapidly succeeding generations of beings who are unable to enter into an active competition for the means of subsistence, and which leaves them prostrate beneath the degrading influences of poor-laws, and of public and private charity? With all their vices and dissipation, they have left to them a fearful power of reproduction. Vice and misery are no checks to population, but on the contrary tend to greater fecundity. The lower the quality of the race the greater their powers of reproduction; and thus neglect brings to the property classes an appropriate punishment. In an able article in *Fraser's Magazine* for May, contributed by Professor Newman, this subject is treated. He has rendered good service by putting in his usually clear and forcible style the views of Malthus before his readers, as these views are misunderstood and have been much confounded with the views of some disciples who wandered wide of the teachings of their master. He combats with great success the strange views of those who would keep down population by inculcating an observance of moral restraint; and he adduces well-authenticated facts to prove what we have asserted, that among the classes who are sunk in the degradation of indigence and dependence there is a fearful power of increase. The following passage is the only one for which we can find space, and we insert it, strongly urging upon our readers a study of the principle it embodies:—

"We are told by the Pseudo-Malthusians, that morality requires us to lay down and act upon general principles. Good: but what is easier than to caricature the maxim? It is a general principle, that *if* every one will be honest and gentle, there will be no evil-doers who must be resisted and arrested by violence: hence the precept, 'Use no violence to any man.' *If* all obey this, all will go right; *therefore* it is the only moral procedure. Of course we reply, that, considering the passions and temptations of men, if the inferior natures become aware that their violences will never be resisted by the better part of mankind, a premium is held out to crime, and crime will certainly be stimulated. Such a mode of arriving at a general law of duty is quite ridiculous. Of the very same kind is that which is here propounded to us. '*If* all married people confine the number of their children to three, human happiness will be promoted: hence it is a law of morality so to limit one's family.' But what probability, or what shadow of a chance, is there that this precept of the Economists will be obeyed by the less scrupulous and less intelligent part of any nation, to say nothing of foreign and half-barbarous people? There is no more probability than that they will leave off theft and violence merely because a Quaker bids them. For the more educated and richer, those who are healthier in body and better developed in brain, to obey this precept would not only be not conducive to public benefit, but (if the matter is indeed not personal and private, but one in which the public is to have a voice) decidedly a public injury. If any portion of a field be left unsown with a good crop, it is instantly covered with weeds. When we cannot pluck weeds up, the only way of keeping their numbers down is by preoccupying the soil with better plants. It is to be wished that the population called proletarian, and the whole criminal class, should as little as possible set its stamp on the nation. But if the morally and physically superior portion ever become infatuate enough to obey this Economic teaching, the sure result must be, that the criminals and rogues, the mean-minded and small-brained, the dwarfed and degenerate, will outbreed all the nobler forms and nobler minds, and the nation must go down, like old Rome and Greece. The Rev. Bonner Feast, of Birmingham, is so impressed by the rapid multiplication of the feeblest and most wretched part of the population in our towns, that he has put forth a physical or teleological theory, that the less the bodily energy, the greater is the force of propagation; as though from an effort of nature to save the race from extinction! In Ireland it has been boasted by Economists that the prudent Protestants do not increase so fast as the reckless Catholics: and what is the political effect? An Orangeman on a certain occasion, while inveighing against the priests, expressed it thus: 'Sir, when they found they could not out-argue us, they took to out-breeding us.' The result certainly has been found by Protestants to be very untoward. Massachusetts also, which has been called the brain and soul of the United States, suffers present inconvenience and some alarm for the future from the quick multiplication of her Irish citizens, who are by far the least educated in the State. Such things possibly ought to make us consider whether what we call *prudence* is always the same thing as wisdom. If men could realise in prospect all the cares and sorrows of a family, and balance the anxieties and griefs against the pleasures, it appears certain that great numbers would come to the conclusion of the Chorus in the *Medea*, and of Admetus in the *Alkestis*, that it is better not to marry. When, from whatever cause, this is a prevalent sentiment, a nation inevitably decays. All other losses may rapidly be retrieved; but if population be lost from this cause, it perpetuates feebleness. Malthus himself distinctly declares that the sexual passion could not be made sensibly weaker without public mischief."

This is strictly pertinent to our argument. In building up institutions and states we have to look at the quality of the race.

It is absurd to talk of over-population where the population are healthy and vigorous, and it is in vain to attempt to engraft upon any but the healthy and vigorous the high moral qualities that can alone establish a sound and progressive civilisation. The health and vigour of our population are impaired, and in a vast number of instances destroyed, by the drinking habits. Are our vices intractable? They are, so long as drinking is associated with and at the root of them. Professor Newman says, in the article from which we have quoted, "The drink traffic, in the first place, must be removed before we can discern how far our wickedness is tractable."

We are glad to find that our own views are strongly supported by so high an authority. The hope that remains with us—and it is a strong one—that England will remain as a blessing to the nations, gaining strength and power—is founded upon the belief that her people are awakening to the evils of the drinking habits, and are prepared to take strong measures to correct them.



#### DR. PARKES ON HYGIENE.\*

THERE is a growing conviction among the thinking part of the community, as well as in the medical profession, that a large proportion of the diseases and mortality which afflict mankind arises from causes which are under human control, and that when we are sufficiently enlightened to use the means Providence has placed at our disposal, a great amount of suffering and premature death may be prevented.

This conviction has led to the study of Hygiene, to the enactment of sanitary laws, the establishment of boards of health, and the proposal that some medical men should devote themselves specially to the promotion of the public health, and that diplomas should be given for proficiency in "State Medicine."

The subject of preventive medicine is of vast importance, but its successful practice requires almost universal knowledge. Dr. Parkes is one of the most successful cultivators of this field of usefulness, and his "*Manual of Practical Hygiene*" is a most

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\* *A Manual of Practical Hygiene, prepared especially for use in the Medical Service of the Army.* By EDMUND A. PARKES, M.D., F.R.S., Professor of Military Hygiene in the Army Medical School; Member of the General Council of Medical Education; late Examiner in Medicine in the University of London; Emeritus Professor of Clinical Medicine in University College, London; Superintendent of Renkioi Hospital in Turkey during the Crimean War. 3rd Edition.

valuable contribution to the literature of the subject. In fact, there is no other book in the English language which treats on all the subjects connected with the public health so fully and effectively as this manual. It is beyond all question a most important work; and, as it has reached a third edition, it must have diffused a great amount of useful information. Dr. Parkes's manual was prepared especially for use in the medical service of the army, but it includes the general principles of hygiene applicable to all men calculated to "render growth more perfect, decay less rapid, life more vigorous, death more remote." We are deeply convinced of the necessity there is for teaching all classes the fundamental principles of hygiene. We are constantly meeting with cases where suffering is increased and death occasioned by the violation of the laws of health. We have found in cases of persons suffering from typhus fever, or smallpox, every door and window carefully closed, and extra care taken to exclude the fresh air, and to keep the poisonous emanations in the rooms, to the injury of the sick, and to the great danger of the attendants. We might easily multiply illustrations of the evil effects of physiological ignorance; but what can be a more striking example of the effects of violating the laws of health than drunkenness? This evil is entirely of man's creation. There may be doubt as to the nature of the poisons which produce fever or cholera, but there is no doubt that alcohol is the poison that produces drunkenness. Alcohol is of human manufacture; we can measure, and weigh, and analyse it. We know that it can cause the acute fits of intemperance called drunkenness, or the more common forms of chronic alcoholic disease called intemperate drinking. To prevent and cure the disease and vice and crime caused by alcohol is the object for which temperance societies have been formed.

The Temperance movement is essentially a hygienic movement, and no system of preventive medicine can be perfect which does not do justice to the question of the effects of the use and disuse of alcohol. Dr. Parkes has not neglected this question. One section of his *Manual of Practical Hygiene* is on "Alcoholic Beverages." This section contains a great deal of useful information on the composition, analysis, and adulteration of beer, wine, and spirits, together with plain instructions for the analytical examination of these liquors. A careful study of this section, and the performance of the experiments, would correct many of the popular errors respecting alcoholic drinks. Dr. Parkes, in discussing the question of the use of alcoholic drinks by healthy persons, says that three sets of arguments may be used—the physiological action of alcohol; experience of its use and abuse; and moral considerations; and he adds:—

“To the last point I shall not further allude, for though I do not underrate the great weight of the argument drawn from the misery which the use of alcohol produces—a misery so great that it may be truly said that if alcohol were unknown, half the sin and a large part of the poverty and unhappiness in the world would disappear—yet this part of the subject is so obvious that I do not wish to occupy space with it. To my mind, however, the arguments which are strongest for total abstinence are drawn from this class. Nor does any one entertain a moment’s doubt that the effect of intemperance in any alcoholic beverage is to cause premature old age, to produce or predispose to numerous diseases and to lessen the chance of living very greatly.”—p. 262.

There is a sort of general acknowledgment that the excessive use of alcohol is injurious, and distilled spirits are especially condemned. But when we consider the composition of spirits, and wine and beer, we cannot see any valid reason for denouncing the use of spirits any more than the use of wine or beer, except that the spirits contain a greater quantity of alcohol. The alcohol in wine and beer is produced in the same way as the alcohol in spirits; it is the same in composition; it can stimulate and intoxicate; and when taken in wine or beer, as well as in spirits, it can gradually transform sober men into drunkards. It cannot be too often stated that the power of fermented and distilled liquors for good or for evil depends upon alcohol. The idea that there is anything in wine or beer which can deprive alcohol of its power to do mischief, is unsupported by scientific research or practical experience. All alcoholic liquors are intoxicating in proportion to the quantity of alcohol they contain. The great point then, as far as the propriety of the use of alcoholic beverages is concerned, is the action of alcohol—In what way does it act when introduced into the human body? We pretty well understand its uses in the laboratory and in the arts, but its action in the body is not so clearly made out. It is true that the effects of its excessive use are well known to every pathologist, but the effects of small quantities are not so obvious. Still a great deal of light has been thrown on the question by recent investigations. Dr. Parkes gives a good summary of the present state of knowledge of the physiological action of alcohol. He describes its action upon the stomach, liver, lungs, heart and blood-vessels, the nervous system, the muscular system, the temperature of the body, and the eliminating organs. He shows that alcohol can derange the action of all these organs and produce disease, but he does not furnish any proof that alcohol is necessary. In fact, all the functions of life can be performed without the aid of alcohol. It seems to us hardly possible to study the action of alcohol in a purely scientific point of view without feeling that abstinence from it is in perfect accordance with the laws of health. Dr. Parkes treats the subject with philosophic calmness, and is very cautious in drawing conclusions. He says:—

“It is certainly undesirable to draw any strong conclusions as to the use of alcohol in health from our present knowledge of its physiological action, but it is impossible not to feel, that so far the progress of physiological inquiry renders the propriety of the use of alcohol more and more doubtful. It appears to decrease strength and to impair nutrition by hindering oxidation, and if in large quantities the reception of food; while habitually taken in any large quantity, it leads to degeneration of the tissues of certain organs, especially of the liver, the nervous system, the heart, lungs, and kidneys. If we look upon the body as an agent of work, from which we desire to obtain as much mechanical and mental force as is compatible with health, we can consider the effect of alcohol, *per se*, as simply a means of preventing this development of force. But physiological experiment does not yet point out what quantity is necessary to produce these effects, nor whether a high degree of dilution, or the admixture of other substances may not, to a certain extent, counteract the action of pure alcohol.”—p. 266.

As far, then, as scientific research has gone it has not succeeded in showing that alcohol is in any sense a necessary of life. On the other hand, the evils flowing from its use may be seen by the most superficial observers. Every medical man knows that alcohol produces and aggravates disease, and causes death. Even unprofessional persons may see the baneful effects of alcohol upon the health of its votaries in their own social circle, and especially in the condition of the poor if they visit them in their homes, in workhouses, or in hospitals. The use of liquors containing alcohol is fraught with danger. In most cases moderate quantities of these liquors cause a feeling of comfort and exhilaration. Thus the appetite for alcohol is easily created, and it generally grows stronger by indulgence. Larger quantities of alcohol become apparently necessary, and in this way the excessive use of alcohol is generated. In the present state of society there is everything calculated to create and increase the use of alcohol. The great majority of the people use some kind of alcoholic liquor. The customs of society sanction its use. Medical men prescribe it, and popular opinion is in its favour. At the same time it is known to be productive of poverty, crime, disease and death.

One great cause of the general consumption of alcoholic liquors is ignorance of their composition and properties, together with ignorance of the effects of ceasing to use these liquors. There is a popular belief that these liquors are good if used in moderation, and that they contribute to the promotion of health and strength. This belief, however, has no support from science. No physiologist has yet discovered any function of life which depends upon alcohol. Still some persons may not be satisfied with negative results, or the qualified answers of science respecting alcohol. Where, then, are we to go for a solution of the great hygienic problem, “Is the use of alcohol necessary or beneficial?” Dr. Parkes says “the arguments from experience

for and against the use of alcohol in health are at present our chief guides." If we take experience as our guide we shall be compelled to admit that it teaches in unmistakeable terms the safety and advantages of abstinence. Dr. Parkes says experience most decidedly shows that "the highest health, the greatest vigour, and long life, are quite compatible with entire abstinence from alcoholic liquids." Dr. Parkes refers to important evidence as to the use of spirits under various circumstances. He states that all observers condemn the use of spirits, and of even wine and beer as a preventive against cold, and that in the case of great heat the evidence is almost equally conclusive against the use of spirits or beverages containing much alcohol. There is certainly a great difference between the popular opinions respecting alcoholic drinks and the lessons taught by experience. When we hear persons of education or medical men denouncing abstinence and eulogising strong drink, or speaking of its nourishing and invigorating powers, we feel convinced that whatever other acquirements they may possess they are speaking of matters beyond their experience. Dr. Parkes cites a variety of evidence respecting alcohol, and shows the advantages of abstinence under the exposure and exertions of war. He says:—

"Even under circumstances when the use of spirits might be supposed *a priori* to be useful, as when men are exposed to cold and wet, soldiers are better without alcohol. On this point no testimony can be stronger than that given by Sir John Hall, K.C.B.\* He says, 'My own opinion is that neither spirit, wine, nor malt liquor, is necessary for health. The healthiest army I ever served with had not a single drop of any of them; and although it was exposed to all the hardships of Kaffir warfare at the Cape of Good Hope, in wet and inclement weather, without tents or shelter of any kind, the sick list seldom exceeded one per cent.; and this continued not only throughout the whole of the active campaign, but after the men were collected in standing camps at its termination, and this favourable state of things continued until the termination of the war.'"—p. 268.

Some of the strongest evidence of the practicability and utility of abstinence has been furnished by the experience of military men, and some of the most dire effects of intemperance have also been exhibited by soldiers. At the present time there is a considerable number of teetotalers in our army, and the National Temperance League is labouring to increase the number. We are satisfied that the interests of the men and the efficiency of the army would be greatly promoted by temperance. Dr. Parkes says:—

"It is known to every officer that good discipline is inversely as drunkenness; but it is not so well known that, when debarred from spirits and fermented liquids, men are not only better behaved, but are far more cheerful, are less

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\* *Medical History of the War in the Crimea*, vol. i. p. 504.

irritable, and endure better the hardships and perils of war. The courage and endurance of a drunkard are always lessened, but in a degree far short of drunkenness; spirits lower, while temperance raises, the boldness and cheerfulness of spirit which a true soldier should possess. This was remarkably shown by the 'illustrious garrison' of Jellalabad in the old Affghan war. Debarred from all alcoholic beverages, it was noticed by all that the men were not only healthier and better behaved, but were more hopeful and cheerful than could have been anticipated."—p. 270.

It is the same in civil life as in military—the use of alcohol is productive of evil, while abstinence contributes to physical and moral improvement. If experience can prove anything, the experience of the hundreds of thousands of teetotalers in this country proves that alcohol is neither necessary nor useful, and that ceasing to take it conduces to health of body and soundness of mind.

We regard the use of alcohol as a great cause of disease, which the advocates of sanitary reform too often overlook. They direct attention to impure air and water, to unhealthy habitations, to bad food, and other evils, but seldom are the terrible effects of alcohol properly considered. And yet alcohol is one of the greatest causes of preventible disease and mortality. Alcohol produces disease by direct and indirect action. It produces disease by its direct action upon the bodies of those who use it, as we see in the case of the intemperate, and it produces disease indirectly by depriving many of the poorer classes of the means of obtaining healthy homes and proper food and clothing. In this latter way it injures the innocent as well as the guilty. This was well shown in a paper by Dr. Markham, in which he says, "I do not think I am exaggerating when I state that a very large proportion of the diseases of male patients in our hospitals may be traced directly or indirectly to the effects of drinking or drunkenness. A long list of kidney, liver, and brain diseases physicians trace directly to the effects of drinking." And he adds:—"A large proportion of the diseases of the mothers and children who swarm in the outdoor department of hospitals, also find their source in the husband's or the father's drunkenness. These diseases are, in great part, the results of want of food—of semi-starvation which the family suffers through this drunkenness." Now all this disease is clearly preventible, and just as every available means ought to be employed to prevent the ravages of fevers and cholera, so ought suitable means to be employed to prevent the destructive action of alcohol. The way to prevent all the disease and vice and crime and death caused by alcohol is simply to abstain from all alcoholic liquors. And when the people are sufficiently enlightened to see the evils caused by alcohol, and the advantages of abstinence, we may hope to see our country saved from the curse of intemperance. It may be a

long time before this takes place, but the fact that drunkenness and all the other evils flowing from drinking are of man's creation, and may be prevented, admits of no dispute. It is equally clear, that the most perfect health and strength may be maintained without the aid of alcohol.

As this journal is specially devoted to subjects connected with temperance, we have noticed only that part of Dr. Parkes's manual which treats of "Alcoholic Beverages"; but the book contains a mass of information on all the departments of hygiene, as well as on subjects specially relating to the army. It is an encouraging sign of the times, that some of our highest medical authorities not only call attention to the evils caused by alcohol, but also recognise the practicability of abstinence. Teetotalers may be called "weak-minded," or "fanatics," or other unpleasant names, but no one who understands the human body and its functions, and the effects of abstinence from alcohol, can fail to see that teetotalism is physiologically right.



## DR. BIRD ON THE CRAVING FOR DRINK.

THE question of temperance is one of deep interest to all who wish to promote the health and happiness of the people. It is also a question of special interest in a medical point of view; for the intemperate use of strong drink is not only a great cause of disease, but is itself the result of a diseased condition of body and mind. We regard the excessive use of alcoholic liquors as truly a disease as any we have to deal with. This opinion of the nature of intemperance is gaining ground with the public as well as with the profession; and in proportion as the question is discussed on physical grounds, we may expect a more clear conception of the nature, the causes, and the remedies for intemperance. Intemperate drinking has been termed oinomania, dipsomania, and alcoholism. Dr. Bird, of the Bengal Army, has recently published a volume of *Physiological Essays* :\* one of these, consisting of sixty-eight pages, discusses the question of intemperate drinking under the quaint but expressive title of "Drink Craving." In this essay Dr. Bird has mingled truth and error. We shall notice a few of his statements, and try to correct some of his erroneous views. Dr. Bird gives the following description of drunkards :—

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\* *Physiological Essays. Drink Craving, Differences in Men, Idiosyncrasy, and the Origin of Disease.* By ROBERT BIRD, of the Bengal Army. London: Trübner & Co., 60, Paternoster Row. 1870.

"A true drunkard is he who cannot, or who can only partially, control his appetite for alcoholic stimulants, and who, according to the relative strength of the craving and his voluntary control, does in various degrees, at the expense of purse, health, reputation, and all his duties, social and religious, indulge in alcoholic stimulants. At one extreme stands the chronic drunkard—he who is continually drunk when he has the opportunity and the means of making himself so; and on the other, that admirable character who, although he has hitherto passed, and is still passing, soberly through life, is nevertheless a drunkard—a latent drunkard, a man of strong mind and iron will, who knows that to drink a little is to let loose the caged devil within him, and who is therefore a total abstainer."

There are no doubt many who cannot drink a little without going to excess; but we have not generally found these persons to have what may be properly called strong minds or iron wills, although some of them possess sufficient common sense to let alone drinks that do not suit them. The great majority of the total abstainers in this country, however, do not belong to the class of "latent drunkards." They have become abstainers for various reasons. Some have studied the physiological action of alcohol, and have arrived at the conclusion that to abstain from alcoholic drinks is wiser than to drink them. But by far the greater number have become total abstainers on social and religious grounds. They wish to promote temperance—to reclaim the intemperate—to preserve the young from the seductive influence of strong drink; and for this purpose they abstain, and try to induce others to follow their example. We have dwelt longer on this point than may be thought necessary, but there are persons who have not made themselves acquainted with the temperance movement who may fall into the error of supposing that abstainers are persons unable to guide themselves, or, as Dr. Bird calls them, "latent drunkards." The reverse of this is the truth, the great majority of the members of temperance societies being persons who were always temperate, and quite capable of using alcoholic liquors in moderation if their reason and conscience did not teach them a more excellent way. Dr. Bird says drunkards may be arranged in three classes—the periodic, the temporary, and the chronic. The continued form of drink craving is the most common.

"Like the Great Plague, it walks about visible in our streets and public places, and is the presiding skeleton in very many houses. As is well known, when unchecked its diagnostic symptom is daily drunkenness, less or more complete. When men are afflicted with this condition in its most virulent form, abandoning all other occupations, getting drunk becomes the business of their lives. The vision of alcohol fills their thoughts and imaginations at all times and at all places, and shuts them out as it were by an impassable barrier from everything around them that is respectable and human. All they think and do has reference to the indulgence of the overpowering appetite which has enslaved them. Afflicted in a less degree, if, in the main, men attend to their daily business, and make a show of discharging their various duties, they probably at least select getting drunk to be their pastime."

This is a striking picture of cases such as we often meet with ; and the cause of this form of dipsomania, or drink craving, according to our view of the case, is the poisonous action of alcohol upon the nerves and brain. Dr. Bird gives a somewhat different view ; he says :—

“ The most common cause of this form of drink craving is the habitual excessive use of alcoholic stimulants, that is, in quantities greater than is necessary to satisfy the natural wants of the body.”

The Doctor does not tell us what the natural wants of the body are that require alcohol. The fact is, there is no organ or function of the body that naturally requires alcohol, any more than it needs ether or chloroform. The desire or seeming want of alcoholic stimulants is produced by taking them, and if men never take them they never feel the want of them. Dr. Bird speaks of “ habitual excess ” as the cause of this form of drink craving. We should like to know how he would account for the “ habitual excess.” That is the all-important point. We are constantly meeting with intemperance, and disease, and death, produced by the excessive use of alcoholic liquors. What produced the excessive use ? It will not do to say with Dr. Bird that the excessive use is produced by the “ habitual excessive use.” We want a better answer than that. We are of opinion that the excessive use is one of the effects of the moderate use—that alcohol exerts a special poisoning influence upon the nervous centres—that this poisonous action is cumulative, and that slowly and gradually the moderate use culminates in the excessive use. Dr. Bird considers

“ that drink craving is only a morbid development of an appetite for stimulants of some kind, which *is natural and has been natural to men in all ages.*”

As the italics are Dr. Bird’s, he evidently thinks he has enunciated an important doctrine ; but if we were to admit that men naturally, without the application of reason, seek for stimulants, would that show that the appetite for alcohol is natural, or that its use is necessary or beneficial ? It is very common to hear persons try to vindicate the use of intoxicating liquors on the ground that in all ages men have used alcohol or some other narcotic ; and it has even been asserted that there is an instinct in man which leads him to seek for narcotics. Now if men in all ages were infallible, their practices might have great weight in favour of the use of narcotics or stimulants, as well as in favour of idolatry, slavery, and other evils. But we do not believe that men in all ages were wiser than they are at present. On the contrary, there never was a time when men possessed so great a knowledge of the wonderful works of God and the laws of nature as they do now ; and as to instinct

leading men to the use of narcotics and stimulants, that is an acknowledgment that reason does not teach the necessity for these things. It is in uncivilised countries, among savages, and idiots, and children, that instinct is the prompting principle. As men become civilised and educated they are no longer led by mere instinct, but take the higher principle of reason for their guide. It is by the application of our powers of reason, and not by instinct, that we are raised so high above the lower creatures, and by reason all our practices ought to be regulated. But whether men have or have not a natural appetite for stimulants, it is certain that such an appetite can be called into action. Thus, by the use of opium, we may soon create a desire for opium, or by the use of tobacco make ourselves require tobacco, and so with alcohol and other nerve poisons. The use will create an apparent necessity for them. Dr. Bird, speaking of the appetite for narcotic stimulants, says :—

“It is an appetite which gains size and force from its own indulgence, and depends for its full development on physical conditions engendered by habitual excessive use of intoxicating and stimulating substances, and on other causes as yet only partially known. Further, I believe that all men, if the most effective means be employed, can with more or less difficulty be made drunkards in various degrees, for all have within them naturally the capability of becoming so.”

It will be a great point gained when people recognise the fact that drunkenness is an artificial production. That to produce it men must employ skill in producing alcohol, and that money must be expended in the purchase of the liquors which produce it. There is a sort of feeble recognition of the possibility that any man may become a drunkard, but people in general appear to think it is not likely that they will ever fall into this vice. We frequently meet with persons in whom the alcoholic appetite is pretty fully developed, who yet fancy that they are perfectly safe, and speak with contempt of weak-minded persons who do not know how to guide themselves. This is one of the most dangerous effects of the use of alcoholic drinks, namely, that as the desire for the drinks increases, self-knowledge and self-control diminish, and insensibly the victims are urged on in their fatal course. In all ranks of society the alcoholic appetite is in course of development, and the three classes of drinkers, hard drinkers, and oinomaniacs, are in course of manufacture. All the agencies for the production of drunkenness are at work, and, while drunkards are dying off, other drinkers are being trained up to take their places. As the intemperate use of alcoholic drinks is one of the results of the supposed moderate use of these drinks, everything which leads to the consumption of fermented and distilled liquors contributes to the production

of the drink craving. Thus the teaching of the young to use beer or wine, the drinking customs of society, ill-health, peculiar occupations, the medical prescription of alcoholic drinks—in short, everything which promotes drinking, aids in creating the drink craving, with all its terrible consequences.

Widespread as is the disease, and numerous as are its victims, it is curable. We have seen the most confirmed inebriates restored to perfect health by simple treatment. The first step towards the cure of intemperance is ceasing to use any liquors containing alcohol. This alone, in many cases, is quite sufficient to effect a cure. The various temperance societies have proved that, and are able to furnish numerous illustrative cases. But there are cases where, in addition to abstinence, the aid of the physician is required, and means must be employed for the restoration of the general health; and in some extreme cases, residence, either voluntary or compulsory, in an inebriate asylum may be necessary. In all cases, however, the most important part of the treatment of the victim of the drink craving is entire abstinence from alcohol. There can be no cure without abstinence. Dr. Bird advocates the establishment of sanatoria for the cure of the drink-craving, and gives some extracts showing the way in which Dr. Macleod treats the disease at his excellent establishment, where spirits, wines, and beer are entirely forbidden. There appears to be a growing conviction in the profession in favour of inebriate asylums, and when the public become convinced that intemperate drinking is in itself a disease, we may hope to see these institutions established. There never was a time when the evils produced by intoxicating drinks were more generally recognised, or when more measures were proposed for diminishing or preventing these evils than at present. Earnest men are labouring in different ways to promote temperance. Some look to education as the panacea; others place their hopes upon the establishment of working men's clubs. A large number of friends of temperance look to the Legislature for amendments in the licence laws, while the National and other Temperance Leagues advocate voluntary abstinence as the most effective remedy. We will not at present discuss the comparative merits of the different measures for dealing with our national vice of intemperate drinking, but will merely add that the radical cure for individual and national intemperance is total abstinence from all alcoholic liquors, and that as intemperate drinking is caused by alcohol, everything which reduces the consumption of alcoholic drinks may, to that extent, diminish the evil.



## Correspondence.

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## A LEAF FROM A PHYSICIAN'S NOTE-BOOK.

(To the Editor of the *Medical Temperance Journal*.)

SIR,—The following cases have all recently occurred in my practice in a small rural town, by no means the *worst* or the most *drunken* in a wealthy and populous neighbourhood. They should not be lost as beacons to the unwary, but I fear they will be unless you record them. In the district in which they happened people are still going on in their heedless and suicidal custom of drinking alcohol, unmindful of the victims which daily fall to the reaper, of which these are but a very few. They are neither isolated nor rare, nor the worst cases that are coming under my observation every week. I keep my eyes open, and watch; and my utmost efforts of private persuasion, and my public advocacy of total abstinence fail, I fear, to stop the forward march to death of those deluded victims whose existences are daily sacrificed at the Bacchanalian car of Juggernaut. *How long is this state of things to continue?* and when will the eyes of men be opened so that they may see the physiological delusion under which they are labouring, in imagining that they are aiding nature in the use of alcohol either in health or in nine-tenths of the cases of disease met with in daily practice? Fearing that the following laconic extract from an eminent writer has been overlooked or forgotten, I am tempted to reproduce it here, and wish that it were engraved in marble in every consulting-room:—

“Alcohol is an agent utterly foreign to the human body and its normal wants—one that never gives power like food, nor aids circulation like water, nor produces heat like oil, nor purifies like fresh air, nor helps circulation like exercise—an agent the

sole, perpetual, and inevitable effects of which are to arrest blood development, to retain waste matter, to irritate mucous and other tissues, to thicken normal juices, to impede digestion, to lower animal heat, to deaden nervous filament, to kill molecular life, and to waste, through the excitement it creates in the heart and head, the grand controlling forces of the life-nerves and brain.”

Would it not be well to open a register of such cases as I send you in every town and village of this kingdom, and publish it weekly, monthly, or quarterly, so that the world may know of the deeds of darkness done in the nooks and corners of Old England in the nineteenth century? Surely we have had experience enough of alcohol to have opened the eyes of all who are not wilfully blind. Observe, all these cases commenced in *moderate* drinking, and some of them by medical advice (*not mine*), and the victims would have scorned the idea, in their days of moderate drinking, of becoming drunkards, and would have laughed at, and regarded as visionaries, all who had hinted such a possibility.

Wishing you every success in your noble efforts to reform a profession which really, in the present day, with its enlightenment, ought to know better than be under vulgar delusions concerning the value of an agent which bears so important a relation to all of us as alcohol,

I am, Sir,

Your faithful Servant,

M. D.

I.—A member of the medical profession, in early life at college, was taught by his companions to drink

alcohol as a daily beverage. The habit grew upon him, and increased year by year until he became a confirmed drunkard, and could never be found sober after middle-day. He had occupied a position of influence and respectability, with an income of £900 per year; and might have exercised a beneficial influence upon hundreds around him, instead of which, it is to be feared, he diffused an evil influence on all with whom he came in contact. He lost his position, income, and practice, and died at the age of fifty-two of diseases produced by drunkenness long before he was worn out. He might have been alive to this day, an ornament to society, and a source of joy to a large circle of friends, but for alcohol.

II.—A young man, of great promise, the hope and joy of a wealthy father and large family, became a member of the medical profession, after an outlay of many hundreds of pounds, and settled down in practice early in life, was married to an amiable girl, and was succeeding admirably, but for alcohol. He had imbibed a thirst for it (very *unphysiological*)—it increased upon him—he was often seen in public in a state of intoxication—drank enormously in private—brought on a disease (acknowledged result of alcohol drinking)—and died at the age of twenty-six, and left a widow unprovided for.

III.—A gentleman of considerable and acknowledged ability, of fine and robust constitution, a member of the legal profession, found himself (by a rare combination of fortunate circumstances) very early in life, in the leading position as a solicitor in a wealthy and populous town. He had, by ability and industry, worked his way from a humble origin to a practice which was yielding him £2,000 per annum, when under the age of thirty. The *unphysiological* thirst of alcohol was set up. He sat up half the night at his bottle, kept in bed, from headache, &c., half the next day, and, as might be expected by any person of common sense, the drinking increased, whilst the practice

decreased. Debts were incurred, and to meet some pressing demand, whilst maddened with drink he pledged the deeds of a gentleman without the sanction of their owner, who, from supposed kindness, refrained from prosecution; but the facts were somehow publicly known, and disgrace and odium, with loss of practice and poverty, ensued. The Bankruptcy Court was sought, and, with considerable difficulty and delay, the certificate was obtained. No dividend paid. The drinking increased, and this gentleman died a miserable death at the age of thirty-seven, of diseases which were universally acknowledged to be the direct result of drunkenness; wife and three small children left unprovided for. Their lot would have been the workhouse if the wife's relatives had not come forward, and supported, and helped them. But for alcohol, this man might, to this day, have been alive, enjoying his position and income.

IV.—A tradesman, in a good position, took to habits of drinking, between thirty and forty years of age. They increased upon him, despite the persuasive efforts of a clergyman and myself, and he died at the age of forty, a victim of the strong drink delusion.

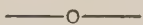
V.—A labouring man, whilst out with his master's horses and waggon, called at a public-house—imbibed a quantity of beer—became drunk—went home, and, when he reached there, fell from the top of the waggon to the ground, from his incapable condition, and produced injuries to the brain, which resulted in his death two days after. Facts stated to coroner and jury at inquest. Verdict of accidental death. Nothing said of alcohol which had caused it. Wife and three children left to the provision of the workhouse.

VI.—A labouring man, with wife and large family, went home, after his day's work, in a state of intoxication—got safely to top of stairs, and then fell backwards from top to bottom of stairs, and was dead before a medical man could reach him. Inquest on the body—facts stated to

coroner and jury—verdict of accidental death—nothing said of drink.

VII.—A labouring man, always addicted to drink, was the subject of Hæmoptysis. He made a good recovery, after many weeks of treatment, and was repeatedly cautioned about his habits. The advice was unheeded; a few weeks after, he got into a state of intoxication again, was

taken suddenly ill on his road home from the public-house, and died in a few minutes whilst drunk, and before a medical man could reach him. Inquest upon body—facts stated to coroner and jury, who gave a verdict of “death from natural causes,”—nothing said of drink, which had caused it. Wife and family totally unprovided for.



## ON THE DISUSE OF ALCOHOLICS AFTER GRAVE SURGICAL OPERATIONS.

By SAMPSON GAMGEE, F.R.S. *Edin., Surgeon to the Queen's Hospital, Birmingham.*

(To the Editor of the *Medical Temperance Journal*.)

SIR,—I have been favoured with copy of a lecture on ovariectomy by Mr. Gamgee, in which very successful results are shown to have occurred in his practice at the Queen's Hospital, Birmingham; and the medical readers of your journal will have their hands strengthened by knowing that this eminent surgeon's testimony goes altogether against the commonplace use of alcoholics in the diet of surgical patients. At page 10 of this lecture,\* after the more purely surgical details of one of the most difficult possible cases of ovariectomy, where an enormous tumour was removed from the abdomen, Mr. Gamgee goes on to say:—

“I have incidentally told you that the patient was sick one day from gastric disturbance. That was on the ninth day after the operation. She seemed to crave very considerably for a glass of beer, and I let her have it; the result was that in the course of about four hours her pulse rose from 100 to 125; she had a sense of great distension of the abdomen, and just one attack of vomiting. A gentle warm water enema caused relief from the gas, and the patient continued easy afterwards without a break. She

has had no stimulant beyond the very small quantity reported, and I attribute her recovery in no small measure to this circumstance, and to the perfectly quiet manner in which she has been kept.

“The patient had a small portion of filleted sole the fifth day, and has never since ceased to enjoy solid food, varying fish, mutton, and beef for dinner; a boiled egg with toast and tea for breakfast, a light farinaceous supper, and beef-tea at intervals during the night; cold water the unvarying beverage.

“The tongue has without any exception continued clean and moist, the skin cool and soft; and since reaction set in after the operation, the temperature has never been one whole degree above the normal standard, while, for the last six days, it has denoted perfect health.”

“... Connecting these remarks with what I have said upon the non-administration of stimulants, I may repeat what I said before the British Medical Association at Oxford, that I believe no two graver errors were ever promulgated by able men than those propounded by Dr. Todd and Mr. Lister in the two proposals: the first relating to the extensive administration of alcohol, and the second to the propriety of rubbing strong car-

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\* Churchill & Sons. London, 1871.

bolic acid into the recesses of a compound fracture."

Other details are given showing that the patient's convalescence was perfect, rapid, and uninterrupted, that on the thirtieth day after the operation she returned home by railway. I trust Mr. Gamgee's outspoken opinion on this question, and the results of his practice, will call the attention of other eminent surgeons to the present delusive and injurious practice of relying upon intoxicating liquors as an article of diet.

Perhaps it may not be out of place for me to add that I have had the opportunity of seeing and assisting surgical teachers and personal friends in a large number of these grave surgical operations in London, and I have long been convinced that much of the mortality that has attended them is due solely to the alcoholic liquors which have been given. It has also seemed to me that a very prolonged and profound anæsthesia from chloroform during the operation produces on the patient's blood a disorganising effect of the same kind as that caused by the free use of alcoholics. Whenever the administration of the chloroform has devolved upon me, I have always preferred to keep the anæsthesia at a minimum degree, and to maintain it for as short a time as possible. I believe this has often made the difference between the recovery and the death of the patient.

On Dec. 11, 1860, it fell to me to perform Cæsarian section in a case of impassable cancerous obstruction. Notwithstanding the remonstrances of many medical friends whose opinion I much valued, I acted on my own conviction that the patient would be more likely to recover without alcohol than with it. A note in the *Lancet* of Dec. 22, 1860, from one of the medical gentlemen who were present at the operation, thus describes the result:—

"I saw the woman this morning

(tenth day) lying on the sofa, almost as well as any ordinary patient, and, despite her cancer, likely to get about again."

The *Lancet* of Jan. 5, 1861, contains my own detailed report of this case. I extract the following sentences:—

"She has since gained strength rapidly, is now suckling her baby, and is doing marvellously well. . . .

"The exclusion of all sources of infection, the purity of the instruments and sponges, and thorough cleansing of the hands, are points to which great attention was given. *Excepting a simple anodyne, no drugs were administered, no mercury on the one hand, and no brandy on the other. I thought these great incisions more likely to be healed by nature in her own way, than by nature under the influence of either mercury or brandy.* The peritonitis, though most severe, was treated simply, and the result justified the practice. This case will go towards diminishing the hitherto frightful mortality of our Cæsarian operations."

Ten years ago such practice was in the teeth of the prevalent medical doctrines. Dr. Todd was in his glory, and brandy practice was all the rage. Looking back over what I have since seen, I can only state that the impressions which then influenced my practice have since ripened into a solid and governing conviction. I now see clearly that the present generation of medical men have done infinitely more harm by their prescription of intoxicating liquors than the last generation did by their orthodox poisoning, bleeding, and starving, and by which we now know that the sick people of that time were merely killed or maimed, although it was done strictly *secundum artem*, and with the best possible intentions.

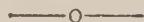
I remain, Sir,

Your obedient Servant,

JAMES EDMUNDS, M.D., M.R.C.S.  
4, Fitzroy Square, W.

May, 1871.

## Miscellaneous Communications.



### A SPECIAL ALCOHOLIC EDUCATION NEEDED BY THE MEDICAL PROFESSION.

THE following address was prepared by Dr. R. D. Bayley, Stourbridge, for the Annual Meeting of the National Temperance League, held in Exeter Hall, on Monday evening, 1st May:—

“ In complying with the request of the National Temperance League to add my testimony in favour of the principles of total abstinence from all forms of alcoholic drink in health and disease, I may premise that I am a medical man in somewhat extensive practice in East Worcestershire, where I have been located during the last nine or ten years. And, as the best proof of my sincerity in the truth of the views which I advocate, I may state that during the whole of that time I have been personally a total abstainer; and I became so neither upon the impulse of a moment, nor to gratify any pre-existing crotchet or prejudice which had existed in my mind, but as the result of many years’ anxious thought, much inquiry, close observation, and reading upon the subject of alcohol with reference to the human body. For a long period I had watched and studied the question, which I had regarded as one of the most important subjects of scientific investigation, in addition to its moral importance. In pursuing such a subject I had no pecuniary or social advantage to gain; I was in the very reverse position of that so graphically described of some of our modern agitators, of having ‘ nothing to lose, but everything to gain.’ I had everything to lose, but nothing to gain. Nor had I any previous bias or fanatical leaning towards total abstinence. All my early associations and convictions inclined me to opposite views. I had been brought up and educated in a firm and sound belief of the value of alco-

hol both in health and disease, and like many more of my profession, I imbibed false notions of its value. Nor did a medical education, as conducted in this metropolis, tend to weaken or dissipate these views. True, I received many lessons as to the value of alcohol and its remedial power, but I heard nothing about its abuse or its prolific power in the *production* of disease, its production of woe and misery in every conceivable form, or of its induction of premature death. These lessons were left to be found out by practice and observation in after life, nor had I to wait long nor travel far before I saw enough to convince the most profound sceptic. After I had finished my education, and passed my examinations, I felt that my *alcoholic education* had to commence. Even then, in my happy and youthful ignorance, I knew not a tithe of the nature of that agent which has always played such an important part on the medicine shelf, and which has unquestionably been more abused by men to their own destruction than any other substance in existence. Further knowledge had to be sought by subsequent study, investigation, and practice, and it was then that my *special alcoholic education* began. All men need special education in the alcohol question ere they are in a position to weigh the matter, or to be ‘ posted up’ in the literature of the present day upon the matter. The time of the medical student is too much engrossed with his multitudinous subjects while at college to pursue a special and extended inquiry into the subject of alcohol with reference to the human body, and yet the subject is one of the most primary importance, and should form a much more extended

subject of investigation than it does at present. Now it only occasionally forms a subject of investigation in the leisure time of after life, and then amidst the cares, and strife, and competition of securing a livelihood, it is either neglected or forgotten altogether. During the last fifteen or twenty years, temperance literature has been very prolific, and no man's education (whether he be medical or otherwise) can be complete until he has mastered it. The members of my noble and philanthropic profession, like the rest of mankind, need special education in the alcohol question, and until they receive it, there will always be an incompleteness of their ability to deal with this matter in a satisfactory manner. Our modern temperance literature abounds in argument, fact, and enlightened views of the action and effect of alcohol upon the human body, by men whose special business it has been to throw fresh light upon this subject, and these writings cannot fail to tell upon thinking and reasoning men. In answer to this mass of literature, argument, and proof of the injurious effect of alcohol upon the body, what have our opponents done? Why, nothing but attempt to laugh or to sneer at us. The day is gone for this sort of answer, and people in the present time are becoming too enlightened to be gulled as they once were. Why have our opponents not met us by arguments as clear, as conclusive, and as convincing in favour of alcoholic drinks, as we have advanced against them? Simply for a very good reason, that they have not had the power. But alcoholic drink has never maintained its place upon an argumentative or intellectual basis, but solely upon a baser and more animal foundation—the animal appetites of men. The drink interest is strong enough, and wealthy enough, to upset us if it possessed the power, and if it had truth upon its side—but it has neither the truth, nor the power. Year by year have we grown and increased, until we have become a powerful and formidable body. And having truth and righteousness upon our side, we shall continue to grow,

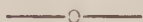
until the last enemy, and his ally drunkenness, shall be overcome. I ask again, where is the reply of the advocates of drink to such men as Grindrod, Carpenter, Lees, Munroe, Edmunds, and a host of others? Echo may answer, 'Where?'—no argument to upset these men has ever been, or ever will be, forthcoming. And whilst we mourn over our nation's drunkenness, and pray for a better and more happy state of society, we long for that happy millennium when men shall discover that they have been employing alcohol upon false pretences—that it is neither a nutriment, nor a stimulant, nor a stomachic, nor a restorative, nor a tonic, nor a true medicine, as they have been supposing, but a dangerous and treacherous poison, which has little power except in the production of disease, having no relation to our bodies, which neither need it nor require it under any normal condition, nor, indeed, in the vast majority of cases of disease in which it is now popularly employed. In thus advocating the principles of total abstinence, as I said before, I have no interest to promote, nor any place or credit to obtain. On the other hand, I am a loser largely in a pecuniary sense, as well as the recipient of a considerable share of public odium from my conscientious desire to benefit my suffering and erring fellow-creatures. To leave a practice in which I am now wanted in a dozen different places to come here and recommend people to banish from their use one of the most prolific sources of disease, is, to say the least, a suicidal policy, and one more adapted to take the bread out of my mouth than to promote my interest. Nothing but a sense of innate duty, and a desire to fulfil my higher duties as a medical man—to prevent as well as to cure disease—would induce me to take this course. We want to see the eyes of our suffering and deluded fellow-men opened, that they may pause ere they accomplish their own mental and physical ruin. For years I have seen the evils and mourned over the results of this drink, and it has been one of the objects of my ambition that

I might do something to stay its devastating course. I see the effects of drink in every land, in every village and town to which I go, and in the metropolis. I fear no tongue has ever told a tithe of its evil influence. Cases of mental and physical wreck and ruin are cropping up before my eyes every week and every day, in one little isolated spot of our land, and if only multiplied by the number of towns and villages in England how awful must be the result. We see too much of the drink traffic to be blind to its fruits. The good old book tells me that I shall know a tree by its fruits; and if I judge of this *evil* tree by its fruits, what shall I say of it? It is unquestionably the Upas tree of our land, and if our philosophers and public benefactors would apply their axes to its roots, how much more philosophical would it be than the fashionable mode at present adopted of lopping its branches and plucking its flowers! We want the tree exterminated: it is neither useful nor ornamental, and society will never be safe until it is eradicated from our soil. How can we be blind to its effects? No man who is not wilfully blind can fail to see the fruits of this tree. 'Tis a covenant with sin, and death, and the evil one; and every right-minded person should in every fair way sanction our movement. And if England is to hold her own amidst the conflicting strife and competition of nations she must reform her drunkenness, which is already eating at her vitals, and corroding her very core. Abroad we have the reputation of being the most *drunken* nation of the world; and if we are to save and keep our own, we must put off this vice, or we shall go down, and sink into the insignificance of ancient Greece, Carthage, or Rome. In the competition of the present day a drunken nation or people cannot keep pace with sober ones. I see my nation standing fairest and foremost in the rank of pre-eminence in arts, sciences, literature, learning, and manufactures, and withal it is in danger from its besetting sin. We all mourn over it, and do our utmost to reform it. In this Divine work the

great and good League, which we meet here this evening, has played, and will hereafter, a most noble and conspicuous part. Unless we wish to be traitors to our profession, and to fall short of our duty, we must all lend our hands to enhance this good work, and stem, as far as possible, the drunken tide—'Because of drunkenness the land mourneth.' Viewed purely as a scientific question, our principles must advance, for they are founded upon scientific truth. We maintain that alcohol is not only totally unnecessary, but *absolutely* injurious for every normal condition of the human system. And almost all the modern scientific investigation and experiment for the past fifteen or twenty years have tended to corroborate the truth of the principles which we started with years ago. Already we have cut away almost all the ground upon which our opponents justified the dietetic use of alcohol, and we shall soon cut away more of the foundation upon which the *medicinal* use of alcohol has rested. Drinkers and their apologists are remarkable for the rapidity with which they shift their ground. As soon as one of their foundations is cut away, they change to another. And so they have been changing for years. Indeed, according to the statement of one of the most enlightened members of their own body, '*There is nothing yet definitely settled about the action of alcohol.*' And withal they are very dogmatic. They have never yet satisfactorily explained away one of our axioms, that alcohol has no relation whatever to the body, either as a nutriment or a stimulant, or a restorative; but it is, as it has ever been, a simple poison, which is rejected by the body, and thrown off undecomposed as it went in, without leaving any of its substance behind it, and, in its transit, neither benefiting nor aiding, but physiologically acting as a narcotic irritant, and laying the foundation of future disease. Instead of being a valuable adjunct to the medicine shelf, alcohol is perhaps one of the most prolific sources of disease. Alcohol has been proved to come out of the body as it

went in, undecomposed. It acts, to a very great extent, upon the excreting organs, and by contact with them sets up unnatural irritation and irregular action, which end in disease. Its effects upon the lungs, stomach, heart, liver, brain, and kidneys are well known, and tens of thousands of cases of disease of these organs are primarily produced by its use. Whence do a majority of these diseases come, and a thousand others, but from the morbid irritation, irregular action, loss of tone and vital energy, produced by the constant imbibition of alcohol? And lastly, we may ask, why should men thus trifle, every day of their lives, with a beautiful and delicate machine like the human body (of whose structure and functions they know nothing), by plying it *ad libitum* with alcohol, a substance which carries with it destruction and disease wherever it goes? forgetting the old saying that every glass of spirits and water forms a nail in the drinker's coffin; which is very near the truth. We seek by moral suasion, then, to warn men of the dangers which they incur. Every death arising from this cause is as much a suicide as if prussic acid or strychnine had been taken. And yet what a sensation in society does the latter cause, whilst the former is passed

over in silence! And whilst we appeal to the reason of men, and look around us amongst the various philanthropic measures of the day, and mourn over our nation's curse, and seek an object and a sphere where we can render the world wiser and better for our existence in it, where shall we find a more God-like and a more hallowed work than the one in which we are engaged this evening? We can scarcely conceive of a more Divine work, or one of greater beneficence. It is in this field especially that there is such a lack of labourers. Here truly may we say that 'the harvest is great, but the labourers few.' And will not some of the more noble and more enlightened members of my own profession lend their hands to this work? They have peculiar power and special advantages, which they might exercise without detracting from; but in reality adding to, their dignity. It is generally now upon some medical excuse of prescription that so many deluded creatures drift deeper and deeper in the drinking current, and it is high time that the medical profession should awaken, and become conscious of the evils that they are inflicting upon society with one hand, whilst with the other they are dispensing incalculable blessings."



## ALCOHOLIC POISONING.

By G. S. ELLISTON, ESQ., *House-Surgeon to the East Suffolk Hospital.*

I PROPOSE briefly to lay before you a few cases of alcoholic poisoning which I have met with in hospital practice during the last four years, the treatment which I have adopted, and the care that should be taken to correctly diagnose these cases from apoplexy and injuries of the brain, which they much resemble. Unfortunately, the only history you generally get is from the policeman who brings in the case; and invariably all that he can tell you is, that he found the patient insensible in the street—he supposes, from drink.

The first case is one which I had when one of the resident surgeons at the Royal Free Hospital. A law-writer, about thirty-five years of age, was picked up by the police in Gray's Inn at midnight, apparently dead, and conveyed to the hospital on a stretcher. I placed him on a couch, and found the body cold and pulseless, the pupils contracted, the conjunctivæ quite insensible to touch, and respiration scarcely perceptible. I at once applied a very powerful galvanic battery always kept in readiness, placing one pole on the nape of the neck, and the

other over the course of the phrenic nerve. For two or three minutes he did not appear to feel it; but the respiration slightly improved. I varied the galvanism by placing the pole over the pit of the stomach, and sometimes on the nose; here it seemed to have the greatest effect, causing it to twitch violently; and shortly afterwards the head began feebly to rise from the pillow. This was followed by a gasp; and, by still applying the pole to the nose, I was able to bring the body up into the sitting posture; but, directly it was removed, he fell back a dead weight. I continued the galvanism; and in a few minutes he was so far roused as to say, rather thickly, "Take it away; don't burn my nose." At first, he was inclined to relapse; but a few touches of the battery soon brought him round sufficiently to take an emetic. But very little came from the stomach, and the odour of spirits was slight. He was placed in bed, and three or four days afterwards left the hospital quite well.

The next case shows that the serious symptoms of alcoholic poisoning may be caused by injuries received whilst partially under the influence of drink; and the surgeon may easily be misled by the statements of those accompanying the patient. Two nights after the preceding case, a gentleman was brought in by the police, picked up in the street in an insensible state. He appeared to have been drinking, for his clothes were in a disordered state; and he had evidently been robbed of his watch and other valuables. He was galvanised, and was soon sufficiently sensible to tell his name and address. As the hospital was quite full, it was suggested that the police should take him to his home. On his way there, he became much worse, and was taken to the nearest infirmary, where he died during the night. The *post mortem* examination disclosed a ruptured liver, which the subsequent inquiry proved to have been caused by a cab knocking him down. In this case, there was no clue to the injury, as not one of those who brought him in witnessed the accident.

Since being at the Ipswich Hospital,

I have met with two or three well marked cases of alcoholic poisoning. A sailor was brought in one night by the police, who found him lying insensible in the street about a hundred yards from the public-house at which he had been drinking. A medical man had been called to him; but, as he failed to rouse him, he ordered him into the hospital. He was then in a profound state of coma, with all the symptoms which I have before described. I at once applied galvanism; and in about five minutes he began to show signs of animation, quickly followed by pugnacious attempts to knock everybody down near him, more especially the operator. A few more touches made him perfectly sensible; and he took an emetic as quietly as possible, but very little came from the stomach. He shortly afterwards fell into a quiet sleep, and got up next morning feeling as well as ever. Nothing could persuade him that he had been in any danger; and he left the hospital early, treating the whole affair as a joke.

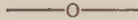
A very similar case happened a few days ago, at the Whit-Monday *fête*. A young man was found in the afternoon on the ground in an insensible state. He was supposed to be suffering from sun-stroke; and, while a medical man who was present was trying to restore him, a bystander said he believed it was the result of some gin he had seen the patient drink some time before. The medical man at once ordered the police to convey him to the hospital, and sent a slip of paper to the effect that it was supposed a large quantity of gin had been taken. When I examined him, I found the body cold and nearly pulseless, and in such a profound state of insensibility that I firmly believe any surgical operation might have been performed without any feeling. After he had been galvanised a few minutes, the muscles of the face began to twitch, and the hand was feebly raised to the nose to dislodge the pole of the battery. He then murmured out, "Take away the chloroform." Shortly afterwards, he opened his eyes. I then put some questions to him,

which he answered correctly, although the language was not very complimentary to myself, and rather unparliamentary. He was soon completely roused and perfectly sensible; and, after a comfortable night's rest, got up feeling quite well, and left the hospital protesting that, as he had no headache, he was convinced he had not taken more than was good for him. In this case I gave no emetic, as I have generally found the contents of the stomach to contain little or no alcohol, it having been all absorbed into the circulation; and he recovered quite as well without.

These cases are very perplexing in private practice; and sometimes, from the general history and appearances, cases of apoplexy may be mistaken for drunkenness, even where the patient is almost above suspicion. Dr. Elliston kindly gave me the following case. He was sent for to a highly respectable tradesman, who had just left a public-house. On entering his home, he staggered and fell on the floor insensible, vomiting a quantity of porter. The symptoms and appearances of

the patient in this case showed that he had been drinking; but, as the breathing became more stertorous, and the pupils more dilated, the medical men present determined to wait a time before using the stomach-pump. Fortunately they did, for he shortly afterwards died; and the *post mortem* examination showed about a pint of blood effused into the brain.

In all these cases I have never used the stomach-pump, but have relied solely upon galvanism, which has always rapidly and completely brought them round. Books tell you that alcoholic poisoning is easily distinguished from apoplectic coma, by the general history and the spirituous smell about the patient; but I have found in nearly all these cases that it is most difficult to detect the odour of spirits, partly from its having become absorbed, and partly from the breathing being so very faint; so that, in any case where alcoholism is at all suspected, I would advise the immediate use of galvanism, in preference to any other mode of treatment.—*British Medical Journal.*



## THE INFLUENCE OF ALCOHOLISM ON THE SIGHT.

AT one of the meetings of the Académie de Médecine, held just after the siege of Paris, M. Galezowski read an interesting paper, which we have hitherto omitted to notice. He entitles it "The Influence of Alcoholism on the Sight," and describes a form of amblyopia which is induced by the excessive use of alcohol. Delirium tremens is often accompanied by disturbances of the senses, and especially of vision; but the amblyopia which supervenes in persons suffering from chronic alcoholism is of a much more marked character, and its symptoms are so little known, that a short account of them will probably be acceptable.

Alcoholic amblyopia has been unfortunately of very frequent occurrence in Paris, especially since the siege

was commenced, as may be judged from the following figures taken from the records of the author's clinic:—During the five months ending in February, fifty patients presented themselves suffering from this malady; while during the twelve months which preceded the siege, only nineteen cases were met with. This increase would seem to arise from the habit which prevailed during the siege of drinking alcoholic liquids in the morning fasting, the stomach being in general entirely void of any nutritive aliment. The affection was only met with in men, with the exception of one case. The following are the characteristic symptoms:—1. The patients perceive that their sight has become somewhat suddenly enfeebled, but it then remains in a stationary condition for several

weeks. 2. The acuteness of vision is sensibly diminished, the patients being scarcely able to read the characters 8 or 10 of the author's typographic scale; while in some cases they cannot distinguish even the largest, as No. 50. 3. Distant vision is much diminished, the face of a person not being recognisable at some paces' distance. A sort of white haze seems to envelop every object. 4. A kind of nyctalopia accompanies this form of amblyopia, the patients seeing more distinctly as the evening approaches, the haze then being less apparent. 5. The perversion of the chromatic faculty is not less characteristic. Carmine, red, and green are often confounded with each other; violet is taken for red, and yellow for red. In these patients a peculiar form of morbid dyschromatopsia is sometimes observed, which is characterised by the too prolonged persistence of each coloured impression upon the retina giving rise to a confusion of colours. Thus, these patients recognise accurately at first each distinct colour, but as soon as they direct the eye to another colour, the perception becomes confused, and they perceive either the primary colour, or a mixture resulting from a combination of the two colours. 6. These patients frequently see double or triple, probably on account of spasmodic contractions of the muscles of the eye. A waiter at a *café* lost his situation because, as he saw every cup double, he poured the coffee on the outside of it. 7. In some of the patients the peculiarity is observed of the objects which they look at seeming to advance or recede, owing to a kind of spasmodic action of the accommodating muscle. 8. The amblyopia is very frequently accompanied by visual hallucinations, which are, however, rather due to a cerebral than an ocular affection. 9. The pupils are not alike in the two eyes, one being generally larger than the other, and often irregular. No other alteration is observed in the exterior of the eyes. 10. Ophthalmoscopic examination, as a general rule, only furnishes negative results, the papilla of the optic nerve remaining of its normal colour. In some cases, however, there may be

observed a kind of serous suffusion, especially in the vicinity of the vessels. The arteries in some places exhibit spasmodic contractions, while the veins are tortuous and gorged. This disposition is observed to be more marked as the disease becomes prolonged, and then the papilla of the optic nerve is pale and whitened, without, however, exhibiting that pearly whiteness which is met with in progressive atrophy of the papilla.

The differential diagnosis of the disease need not be insisted upon after the above statement of symptoms, which proves that alcoholic amblyopia is an affection of the eye apart, which can only be simulated by commencing atrophy of the papilla. But any doubts that may be entertained become dissipated in the subsequent course of the affection; for, while the atrophy advances progressively, the amblyopia remains stationary for weeks or months. It may even be completely cured, to return again after renewed excesses in drinking. With respect to the pathology of this form of amblyopia, M. Galezowski says that "it is due to a kind of paresis of the longitudinal muscular fibres of the arteries, which act in dilating them, and to a spasmodic contraction of the circular fibres of these same vessels. The blood does not arrive in a sufficient quantity for the arteries, while the veins undergo a kind of passive stasis." In conformity with this view, a collyrium of éserine or calabarine has been employed as a means of inducing relaxation of the spasmodic contraction of the arteries. The efficacy of this agent is incontestable, for the patients are immediately relieved, seeing better during the whole period that its action continues, while its daily use leads to a sensible amelioration. In many of the cases large doses of bromide of potassium have produced sensible amelioration, confirming M. Gübler's good opinions of that medicine in the treatment of alcoholism in general.

Alcoholism exerts, also, a very mischievous effect on operations on the eye; and the want of success of the operation for cataract in the poorer classes should often be attributed to

alcoholism and a shattered general health. The paper terminates with the following summary:—1. This disease appears as a consequence of prolonged indulgence in alcoholic drinks, and especially when these are taken fasting or before dinner. 2. Bad food and a wretched condition of existence predispose to its development. 3. Complete abstinence from alcoholic drinks during several weeks or months

is an indispensable condition for recovery. 4. The bromide of potassium is a very efficacious remedy; and the éserine collyrium is one of the best means of combating the visual disturbance. 5. This amblyopia is tractable when combated at an early period; but later it becomes a serious affection, which is very difficult of cure.—*Medical Times and Gazette*, May 6, 1871.

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### DR. LANKESTER'S ANNUAL REPORT.\*

DR. LANKESTER gives the following Table:—

Year.	Natural Causes.	Accidental Causes.	Suicide.	Murder and Man-slaughter.	Unknown.	Drink.	Open.	Total.
1868-9	730	372	89	69	6	43	6	1320
1867-8	671	386	74	54	9	31	37	1262
1866-7	741	475	72	66	12	...	...	1366
1865-6	716	485	79	93	12	...	...	1385
1864-5	655	425	77	70	19	...	...	1246
1863-4	687	416	72	72	24	...	...	1270
1862-3	567	348	70	68	29	...	...	1080

"Thus, in the two last years," says Dr. Lankester, "I have given a separate heading to the cases where coroners' juries have returned a verdict of death from drinking; these were formerly referred to natural causes."

Dr. Lankester makes the following remarks:—

"The total deaths from excessive drinking, as recorded in the verdicts of coroners' juries, are 43 as against 31 in the previous year. I do not think that this can be used as an argument to support the statement that habits of intoxication are on the increase in the Central district. I and

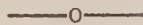
my deputy have both been more anxious than formerly that juries should not hesitate to deliver verdicts in accordance with the evidence on this subject. Juries are very liable to wish to conceal the vices of their neighbours, and to draw over the evidence that clearly indicates that drunkenness has been the cause of death. I should be glad if any investigation in the coroner's court could assist in any manner in leading to an improvement in the habits of our population in this respect. I would especially call attention to the fact that the vice of drunkenness is not confined to the poor, and that its victims are to be found among the rich and well-to-do, as well as amongst the poor. Nor do the inquiries in the coroner's court at all lead to the conclusion that its cause is poverty. That it is more frequently found connected with poverty

\* *The Seventh Annual Report of the Coroner for the Central District of Middlesex, for the year ending July 31st, 1869.* By EDWIN LANKESTER, M.D., F.R.S. Read before the Social Science Association, January 9th, 1871.

arises from the fact that those who indulge in it become lazy and unfit for the duties of life, and where they have to work for a living must necessarily become poor. Nor is this vice confined to men, as is frequently supposed. In my last report I showed that seventeen cases were those of men, whilst there were fourteen of women. In the present table it will be seen that there are twenty-five cases of men and eighteen of women. Drunkenness is not often the immediate cause of death by itself, but it produces effects upon the tissues of the body, which result in causes of death, which may be produced when persons have become sober and temperate. The most frequent conditions that produce death in these cases are effusions of blood and serum on the brain. A large number of accidents result from drunkenness, as will be seen by the table. This table cannot, however, be said to represent to the full extent the cases that are brought to the coroner's court through intemperance. Where the habit of drinking is not known, or at any rate no evidence is given in the court, a large number of cases of sudden death, suicide and accidental death, may be fairly attributed to the effects of excessive drinking on the system. The opaque condition of the membranes of the brain, the fatty degeneration of

the heart, the diseased condition of the mucous membranes of the stomach, the cirrhosis of the liver, and granular disease of the kidneys, are conditions so well known as, connected with the use of alcoholic beverages, that when they occur they arouse the greatest suspicion that the person in whom they are formed has indulged in drinking to an injurious extent. This practice can only be successfully assailed by teaching men and women the danger of drinking alcoholic beverages to excess."

In the discussion that followed, Dr. Hardwicke thought something more might yet be done to show the extent of drinking habits as a fertile cause of death in many inquiries before the coroner's court. For instance, fatty heart cases, effusion of serum on the brain, kidney disease, and other deaths from what are termed generally natural causes, may be fairly attributed to over-drinking. Dr. Lankester's criticism on the shortcomings of the returns of "Judicial Statistics" ought to be made known to the Secretary of State for the Home Department, and he hoped the Standing Committee of the Health section, to whom he proposed the paper should be referred, would take some further action that might lead to an improved system of returns.



## A PHYSICIAN'S PRESCRIPTION.

SOME time since a person who had been for a long period in feeble health, but was of excellent moral character and amiable disposition, recovered from his enfeebled state, and was able to resume his calling in life. It was found, however, to the dismay of his young and lovely wife, and to the bitter grief of his friends, that he was rapidly falling into habits of intemperance, and at length of open and shameless drunkenness. No entreaties of those nearest and dearest to him seemed to be of any avail to stop his

dreadful course. As the pastor and friend of his family, we were apprised of the melancholy state of things, and besought to use all the influence possible to reclaim and save the sadly erring and falling man. His business was soon neglected, and at length given up; self-respect was lost; want, that had never been known in his home, began to be felt. For a long time now, never had he read a chapter or bowed the knee in prayer at the family altar, as had been the custom in the early days of his happy married

life; and never now did he come to the house of God. There was an entire change in the circumstances and habits, disposition and character of the man.

As requested, and drawn by a fond desire to do him good, and bring gladness and hope again to that now sad family, we repeatedly saw and conversed and prayed with the changed and unhappy man. When free from the influence of strong drink he would talk freely with us, at times confess his folly and sin, weep most bitter tears, and make promises almost with the intense earnestness of a desperate man, that he would never touch the accursed drink again. And as we would bow together in prayer for the grace that alone could sustain in keeping from the terrible evil and in doing the right, he would add his most emphatic Amen to the petition. Yet, ere long, he would fall again as low or lower than before, and thus continued reforming and re-falling, and becoming more and more the utter wreck and ruin of himself, until at length he died a terrible death.

Now what was the history of this terrible change in that man? This was a question that we often pondered, and after vainly seeking for some time an account of it from himself, he one day spoke in substance as follows:—"Up to the time of my long declining health no man ever had a greater abhorrence of the drunkard's cup and the drunkard's curse than I—never were ardent spirits in any form put into my mouth—and in no sense had I the slightest desire for it. But," said he, "after I had been ailing some time, my physician directed me to procure a particular kind of ardent spirits, and take a portion of it every day. I hesitated, however, about it, not from any particular fear, but because I could not bear the taste of it. But he insisted that it would do my system good; so we obtained it, and I began to drink it. The effect seemed beneficial, and my physician told me to continue to take it. The repugnance I had to it gradually wore off, and finding it exhilarated me and made me feel better, I more and more willingly took it, and after a

time would look forward with pleasure, and even longing, for the appointed season or hour for taking it, and thus it went on; but," said he with an awful pause, and a look of indescribable agony and despair, "why shall I tell you any more? You see the beginning, and here I am a slave to habit, and a doomed man. I have tried to stop (oh, God only knows how hard I have tried!), but I cannot. The desire for it comes upon me at times with an overpowering force, and I *must* have it—I *must*, I *MUST*!" and he rushed from the room.

It was not long after this that he died, and sad were the thoughts and feelings of the funeral day.

Now, of the properties or value of ardent spirits as a medicine, it is not our purpose to speak. We do not, in any sense, undertake to justify a man for falling into a bad habit, and knowingly and persistently bringing ruin upon himself for this world and the world to come. But we do submit the question—and we do it with all the earnestness of one who feels that the most vital and momentous interests of men are at stake—is there not hazard in prescribing spirituous liquors of any kind as a common medicine, or as a medicine that is to be often or long used, and thus run the fearful risk of having an appetite formed for it? Can a man do this and be entirely guiltless of the blood of the man that, following the prescription, learns to drink, and dies at last a drunkard?

We know we are treading on delicate ground, and we would not even seem to interfere with one of the noblest professions; but when such tremendous issues are involved we cannot but ask men to consider these things and see if there is not some more excellent way. Or if it be a choice, whether the patient shall die with the disease that threatens him, or die the drunkard's death, would it not be better to do the utmost that can be done without the intoxicating drink, and leave the result with God? Strong and noble, and even stately, was the course of the excellent Dr. Benjamin Rush in this matter, as the following, from the *Medical and Surgical Reporter*, shows:—

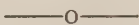
"Long before the temperance re-

form a missionary from the West Indies sought medical advice of Dr. Rush, and when an unpalatable medicine was presented, the patient asked if he could not take a little "good old Jamaica" with it.

"No, sir," the Doctor decidedly replied.

"Why, sir, what harm will it do?" demanded the West Indian.

"What harm will it do?" continued Dr. Rush. "I am determined that no man shall rise on the day of judgment, and say, 'Dr. Rush made me a drunkard.'"—*American Presbyterian*.



## PREVALENCE OF DRUNKENNESS IN THE FRENCH ARMY.

(From the *Medical Times and Gazette*.)

At the meeting of the Académie de Médecine on May 9, M. Jeannel read an important paper on the "Repression of Drunkenness in the French Army." He observes that during his long sojourn with the French armies, and especially during the campaign of 1870-71, he has had ample means of observing the much-to-be-regretted fact that drunkenness among soldiers is neither repressed nor repressed, but encouraged by public opinion, and indulgently tolerated by the officers from the subaltern to the general. At the commencement of the campaign, the troops as they passed through the towns or along the railways were everywhere plied with drink, so that numbers of them were in a state of complete drunkenness along the route. The majority of the officers regard this state as a kind of consolation to the soldier for the miseries, privations, and fatigue which he is subjected to, and think that it would be unjust and cruel to restrain him as long as he does not quarrel and is still able to obey the commands. Drunkenness was indeed often admitted as an excuse for the commission of many faults in discipline; and numbers of officers did not regard the habit as necessarily opposed to the possession of the qualities essential to form a good soldier. While on march, therefore, at every halt, the soldiers, under the eyes of their officers, rushed in crowds to the cabarets, while every battalion was officially accompanied by a cart (decorated with flags, on which might be read the name of the *cantiniere* and

the corps) containing barrels of spirit, which, by addition of water, was extemporaneously converted into cognac. A crowd of nomad *cabaretiers* was always found along the roads or in the midst of the camps, and a brisk competition was maintained with these by ragged girls from the neighbouring towns with baskets filled with bottles of spirit. Moreover, some of the generals relied less on firm courage, patriotic devotion, or military honour, than on a large distribution of brandy when the moment arrived to attack the enemy and carry a position—maintaining that commencing drunkenness was a highly useful stimulus to bravery. That under these circumstances habits of drunkenness have become propagated throughout the army is only what might be expected. And M. Jeannel shows in addition, by quotations from the military regulations, that drunkenness is by them regarded with a very lenient eye, to be punished as little as possible.

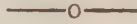
"It has become evident to all," M. Jeannel observes, "that the habit of drunkenness, become thus generalised among our troops, has contributed a great share in the sapping of discipline which has been attended with such disastrous consequences. At the same time that it demoralises the army, it ruins its physical condition, diminishing the power of resistance to fatigue, to exposure to weather, and to privations, aggravating the effects of wounds, impeding the success of operations, and contributing to the mortality from epidemic causes."

He regards, then, the "repression" of drunkenness as one of the primary conditions of military regeneration; and no matter what improvements in this respect may be going on amidst the civil population, these will be of no avail if authority and discipline do not succeed in arresting the habits of intemperance in the army itself—for it is not until he enters the army that the young soldier, as a general rule, contracts habits of debauchery and drunkenness; and it is there that is recruited the fearful band of drunken and debauched *ouvriers* which dishonour and disorganise national industry. Any regulatory dispositions intended for the repression of drunkenness will, however, be of no avail whatever in the army if the bad examples given by officers and sub-officers are not sternly restrained by penalties. "To those who would exclaim against this I can only say that during the last campaign I knew, intimately, a

*chef d'escadron* who frequently furnished a scandalous example of drunkenness bedizened though he was with decorations." M. Jeannel terminates his paper by enumerating the various penalties which, he suggests, should be enforced in counteraction of this monster evil, so destructive of all military efficiency.

M. De Ranse, editor of the *Gazette Medicale*, reporting M. Jeannel's observations, observes:—

"We have several times had occasion to signalise in these pages the sad and painful spectacle which has only but too often presented itself to us during the siege of Paris when we have made excursions beyond the walls. One was really astonished and distressed at meeting with, up nearly to the very outposts of the enemy, so large a number of drunken soldiers, and especially in observing the tolerance which was extended towards them."



#### ADVANTAGES OF ABSTINENCE FROM ALCOHOL DURING EXPOSURE TO COLD.

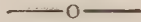
WE (*Lancet*) extract the following from a paper entitled "Oinology," in the *Cincinnati Medical Repertory*, by S. E. M'Kinley, M.D. A group of men, twenty-six in number, some years ago travelling over a western plain, on a track but dimly visible by day, lost their direction when overtaken by darkness. The weather, very cold during the afternoon, became more so as night advanced. Though well provided with food, clothing, and an abundance of whisky, they had no wood or other fuel to make a fire. The occurrences of the night are given in the language of the only physician who accompanied the expedition. He was a man of good, strong, hard sense, with quite creditable medical attainments, considering the limited opportunities he had for securing them, which consisted in reading the domestic practice of Gunn, Ewell, and Thomas. He knew no more than

their books could convey; but, to his credit be it spoken, he knew all they could impart. He had only heard of, but had never seen, a Medical College. Addressing the men, he said:—

"As we can't get wood, boys, we must keep warm, or at least alive, through the powers of *Madam Vis Medicatrix Naturæ*. She is all right in any weather if we don't clog her up and pucker her forces. If I have got any medical knowledge at all, I am going to use it to-night, and the first thing I begin with is this: I am as fond of whisky as any man dare be; but by the gods, the man that gets drunk to-night to keep warm won't see daylight. When the great God of the universe made man the boss workman of the earth, he made all other things first, and the elements too, not to rule over him and to kill him, but to *hunker* down to his wants. But, boys, whisky was *scored* out of

that bill of fare. The *vis medicatrix naturæ* is the highest of all other things, and if she ain't *splintered* up by our own d—d folly, she will ride safe through any storm. We have got to keep stirring round or huddle up in the straw of the waggons as many of us as can cram in together. Each one will keep the other warm. We must all eat as much as possible, but whisky ain't the thing. . . . This is what I told them all; but very few minded me. I didn't taste a drop, nor did Carter or Finley. We then huddled in together on the straw in the bottom of our waggon. We took off our boots and overcoats, and then got on the straw, and put our blankets over us, and our overcoats on the top of them. We were only cold, but did not suffer or freeze. Clark, Reily, and Tanner were very cold, and we heard them yelling nearly all night. They suffered very much, but were not frozen; they drank very little whisky, but they took several *thin drinks* in the run of the night. Seven other fellows that drank a good deal had their toes and fingers scorched, but they got over it in a few weeks. Six of the boys that drank pretty strong

were badly frozen, and never got over it; and four that got very *boozy* were frozen so badly that they died three or four weeks afterwards. But Hutchinson, M'Elroy and M'Alpin were stiff dead by daylight. They got dead drunk, and as they did not make a fuss, the other boys thought the whisky was keeping out the cold, so they drank the stronger. I tell you, Sir, they all suffered just according as they took in the whisky; those that got drunk, froze dead; those that drank less, but too much, died after a while; those that drank only moderately will feel it as long as they live; and those that took only thin drinks, were well nigh *shut up*. We three didn't drink any. The *vis medicatrix naturæ* brought us through. These men were all Americans; their ages ranged from twenty-three (M'Alpin), the youngest, to forty-one (Carter), the oldest of the group. All were equally well provided, each having two blankets. All were in the bloom of life, in the best of health, and ready to encounter, and able to overcome, the hardships inseparable from a frontier life."



### ALCOHOL IN NERVOUS DISEASES.\*

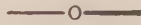
PERHAPS my office in this work is rather to suggest than to warn. Yet whilst on the subject of that special condition of the nervous system which generates the symptoms of hysteria, in its slowly suffering as well as in its fiercely explosive shape, I cannot refrain from an allusion to, and a warning from, that fashion of alcoholic stimulation which has, of late years, taken possession of the ordinary medical treatment. If it had novelty in it, one would, as a medical practitioner, be bound to try it; for it is

wicked—no less—and stupid moreover, in one who professes to have studied *all* methods for the relief of his employers, to pass over any plan because it squares not with his prejudices, or because it would give him trouble; but the plan of stimulation has been tried again and again since the time when tippy Browne first introduced it nearly a century ago, and has always been abandoned after the *fashion* of it ceased. If it had success, it would not only be practised in paroxysms, but would, long ago, have established itself as *the* permanent plan of treatment for all diseases involving nervous irritability: but whether the stimulation come in the shape of whisky toddy, as it did

\* *A Guide to Domestic Hydro-therapeia. The Water Cure in Acute Disease.* By JAMES MANBY GULLY, M.D. London: Simpkin, Marshall & Co.

under Browne; of port wine, in the early part of this century; of bitter ale, twenty years ago; or of rum-and-milk, brandy-and-eggs, stout, champagne—*anything* containing alcohol and jumbled together—as of late under the *régime* of Dr. Todd; in all or any of these forms there is not a record of success which at all justifies the widespread application of alcohol to maladies of the nervous system. And when it comes to pass that sufferers from these maladies, wearied with increasing rather than decreasing distress, at length abandon the stimulation of alcohol and seek that of water, *then* they discover how much time and how much vitality they have expended in the ridiculous attempt to make crutches do the office of flesh and bone legs, to make a cruel *spurring* of the jaded nerves do the office of rich and well-elaborated blood, which can only be made out of animal and vegetable matters as Nature produces them. Let it be remembered, too, that the more the stomach is stimulated by alcohol, the less desire it has for blood-making food, and the less power of converting it into blood. It would be a hard task for any alcoholic prac-

titioner to show that the bottle of brandy, the five or six bottles of port-wine, even the dozen of ale, which he orders his nervous patient to consume in a week, contain materials for a single tea-spoon of blood after their elaboration in the stomach. If it be asked how such a system is accepted, the answer is that sickness is always ready to fly to a treatment which gives the least possible trouble, and requires the least possible exercise of self-denial; which tallies with its usual prejudice on the subject of being "*supported, nourished, kept up*" (the ordinary phrases applied by ignorance to the process of the most rapid consumption of vital power); and, last not least, which saves the practitioner a world of trouble and intelligence which he would have to exert in the enlightenment of his patient, rather than in the yielding to his prejudice. But what shall be said of the dignity of a profession so exercised? *Du reste*, the baneful fashion will go out as it has repeatedly done before, and pass away after it has destroyed its thousands, like some plague sent by Providence to scourge mankind.



## INTEMPERANCE AS A DISEASE.

THE time has come in the history of medicine when intemperance is beginning to be reckoned among the positive diseases which require the interposition of medical science and skill. A recent convention held in New York, composed of superintendents and directors of Inebriate Asylums, have discussed in that volume the subject in a manner which will claim the earnest attention of physicians who desire to be even with the advanced thought and literature of the profession. In this convention were represented the institutions for the treatment of inebriety. Papers were read which are a valuable addition to medical literature.

These papers were carefully consi-

dered and discussed, and the members of the convention were so impressed with the importance of more united and effective effort, that they agreed to organise for a more complete investigation of the subject, and for the development of methods of cure, as is shown by the following articles of their plan of organisation:—

"1. The name of this association shall be the American Association for the Cure of Inebriates.

"2. Its members shall consist of superintendents, physicians, and delegates from boards of directors of institutions for the treatment of inebriates.

"3. Its object shall be to study the disease of inebriety, to discuss its

proper treatment, and endeavour to bring about a co-operative public sentiment and jurisprudence."

The following concise and comprehensive "Declaration of Principles" illustrates the sentiment of the Convention. It was unanimously adopted.

"1. Intemperance is a disease.

"2. It is curable in the same sense that other diseases are.

"3. Its primary cause is a constitutional susceptibility to the alcoholic impression.

"4. This constitutional tendency may be inherited or acquired.

"5. Alcohol has its true place in the arts and sciences. It is valuable as a remedy, and like other remedies, may be abused. In excessive quantity it is a poison, and always acts as such when it produces inebriety.

"6. All methods hitherto employed having proved insufficient for the cure of inebriates, the establishment of asylums for such a purpose is the great demand of the age.

"7. Every large city should have its

local or temporary home for inebriates, and every State one or more asylums for the treatment and care of such persons.

"8. The law should recognise intemperance as a disease, and provide other means for its management than fines, station-houses, and gaols."

We hail this movement as a step which is demanded by the civilisation of the times, and anticipate from it important results. They have adopted a table of inquiries, to be used in all the institutions, embracing important hygienic and physiological considerations, with a view of exhibiting, at the close of another year, a statistical record, which we think must be of great service to the cause of humanity.

The institution at Media, near this city, reports about forty per cent. of the cases that have been under its care as discharged, cured, and usefully employed in their several avocations.—*New York Medical and Surgical Reporter*.

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## DOCTORS AND ALCOHOL.

A CORRESPONDENT of the *Medical Press and Circular* (April 5, 1871) says:—"I observe, in your leading article in this week's journal, 'On Stimulants and Disease,' that you consider, and as I believe correctly, that a reaction is setting in against the practice of stimulation in disease, or threatened disease, of late so rampant throughout the land.

"Now while, Heaven forbid, that we should, in our medical practice, return to the slop diet, with bleeding and purging, which appear to have formed the usual plan of treating every kind of disease fifty years ago; yet I cannot but think that a backward step from the excessive alcoholisation method will not be ground lost.

"Admitting that the administration of alcohol has been carried to a faulty and injurious extent, on whom shall

we lay the blame? Partly, certainly, on the doctors, whose error is of a twofold kind; they may, in blind deference to authority, or on mistaken views of the action and power of alcohol, give this body too freely, or, on the other hand, it may be given in a too great compliance with the popular prejudice of the day. One thing is certain, and it is, that the public like a doctor who 'does something.' If, years ago, the doctor bled, purged, and sweated the patient well before he died, every one was satisfied, and the physician greatly extolled for his energy and assiduity, without which none can say what might not have happened to the patient. Now people's views, so far as methods are concerned, are changed, and they look with a good deal of distrust on a physician who talks of bleeding and water gruel diet; but the man who, at a mere

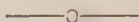
glance, says at once—"You must take a bottle of champagne with your dinner, and half a dozen glasses of port afterwards," is the man for the public purse. "Never mind," says the doctor, "if wine makes your head ache, it is because you don't take enough of it." The cautious, pains-taking man who has been gradually but slowly getting his patient out of some exhausting nervous malady, by his two or three glasses of Manzanilla sherry at dinner time, soon is bowled out by such a go-a-head brother as the one just described, and for a time the patient perhaps goes a-head also, the difficulty being to keep his tongue quiet on the virtues of the alcoholic method. At last, however, down he comes all

at once in a fit, and a long convalescence and terribly shattered nerves are the best results then to be looked for.

"It is not the purport of this letter to say what, in the author's opinion, may be the time and opportunity for alcohol, confessedly a difficult matter, but the object of this letter is to hint at the way in which respectable drunkards and drunkardesses are sometimes made; and to entreat medical practitioners to follow the teachings of experience and of physiology as much as possible in their practice, rather than, in a too complaisant spirit, to make fashion and popular prejudice in any way a rule of action."



## Notes and Extracts.



**ALCOHOL A POISON.**—We have now the high authority of the *Lancet* for asserting that alcohol is a poison. In a short notice on "Drunkards and the Police," published on the 8th of April, 1871, the *Lancet* says: "Surely even a policeman might be made to understand that alcohol is a poison."

**LUNACY AND LIQUOR.**—Dr. J. C. Browne, of the West Riding Lunatic Asylum, Wakefield, observes with reference to our troops abroad:—"It is obvious that even the burning sun and the air-poison of tropical vegetation and exhalation, however much they may predispose to disease of the brain, are, in themselves, less formidable than the burning rum and the fumes of other intoxicating compounds; that delirium tremens is twelve times more frequent, and twice as fatal, as apoplexy; that it is fourteen times as frequent as inflammation of the brain, and twenty-two times more fatal; and that, while hundreds sank under in-

temperance, there was not one victim from a stroke of the sun."

**CRIMINAL LUNATICS IN SCOTLAND.**—The managers appointed under the Prisons (Scotland) Administration Act, in their second report just issued, make the following observations with regard to criminal lunatics in that country. They state that in a considerable proportion of the instances where persons indicted for crimes are placed at her Majesty's disposal on the ground of lunacy, there is a complete recovery from the disease; but it is liable to recur. In the majority of cases it follows on excessive drinking. Kept absolutely sober, with vigilant medical supervision, suitable diet, and regular habits, the person who has committed murder is restored to reason.—*Medical Times and Gazette*.

**WHISKY v. BEER.**—The Scotch Registrar-General defends the national beverage by a comparison of the proportion of deaths from liver disease in

his country as compared with England. He says:—"It is a known fact that malt liquor has a greater tendency to produce deranged biliary action than diluted alcohol in its pure state. Beer in all its forms is the national drink in England, whisky in Scotland, and the effect of these drinks seems to be reflected in the proportion of deaths from liver diseases in the two countries, for while Scotland had only the proportion of thirty-five deaths from all liver diseases in every hundred thousand of her population, the proportion in England was thirty-nine deaths in a like population; and these proportions are pretty constant in both countries year after year."—*Medical Press and Circular*.

BENJAMIN SILLIMAN, LL.D.—This celebrated professor of Yale College, New Haven, Connecticut, a few years ago resigned his post, after fifty-three years' labour in this ancient University, besides having edited sixty-three volumes of the *Journal of Science*, and travelled extensively in all the countries in Europe. In announcing his retirement, he said, "I have just laid down my commission as teacher in this college, after the labour of fifty-three years. I think it is time to do it. Not that I am conscious of decrepitude either in body or mind—for here I stand, erect and strong, in perfect health, with my eye undimmed, and my natural force unabated; but there is a proper time for ceasing my connection with this beloved institution, and that time, I think, has come. Gentlemen, if I owe my vigour of body and mind to any one cause under Providence, it is to *cold water*, inside and out—to total abstinence from alcohol and tobacco." The worthy professor took occasion to exhort his hearers to a like abstinence from these destructive stimulants, if they wished to enjoy a green old age.

DRINKING AND INSANITY IN INDIA.—A matter of some considerable importance, not only in India, but also in this country, is the effect of liquor on a weakened brain. Thus, in India, it is frequently urged by European soldiers when tried by court-martial

for drunkenness, that a previous sun-stroke or brain fever had rendered them unusually susceptible to the influence of wine or spirits; and so in this country a similar plea is often raised by those who have served in the East. Many strict officers ignore this plea; but in the opinion of Dr. Chevers, it should not always be overlooked, inasmuch as such maladies not unfrequently leave behind them a morbid craving for stimulants; and he cites two cases which occurred in his practice as examples in point, one being a military man, the other a civil engineer, both between thirty and forty; both had suffered from the head, and both were attacked with cerebral symptoms in consequence of exposure to the sun, and in both the most troublesome symptom was an incessant demand for beer; both had been moderate men. They were sent to England, and one returned quite recovered.—*Medical Times and Gazette*.

TREATMENT OF DELIRIUM TREMENS BY HYDRATE OF CHLORAL.—M. Curschmann adds his testimony to that of many other writers to the value of this remedy. In his earlier cases he states that he did not exceed from 45 to 60 grains for a dose, but subsequently administered 105 grains, a quantity that we at least should consider to be dangerous. He states that Liebreich has even gone as far as 120 grains for a dose. When it has been given, the patient should be allowed to remain at perfect rest, and, if we may use the expression, have his sleep out. He thinks the stronger the alcoholic potations in which the patient has been accustomed to indulge, the larger is the dose required. Sleep is usually induced in from fifteen to thirty minutes, rarely more speedily, sometimes much longer. The respiration during sleep becomes deep and regular. The pulse is sometimes increased at the commencement of the narcosis, but subsequently falls. The usual duration of the sleep was from nine to twelve hours, but in one case it was twenty-one hours, with a break of half an hour at the thirteenth hour.

Disagreeable effects from chloral of any kind were rare, but he thinks an augmentation in the number of cases of laryngitis was due to its use. —*Deutsches Archiv*. Band viii. January, 1871; and *The Practitioner*, April, 1871.

BEER-DRINKING IN LUNATIC ASYLUMS.—“The beer bill at several of our county asylums,” says the *Manchester Examiner*, “has formed the subject of conversation at the Lancaster annual general sessions. During the past year no less than 48,480 gallons of beer were consumed at the Prestwich Asylum; 23,688 gallons at Lancaster; 22,779 gallons (including porter, which is described as the favourite beverage) at Rainhill. The difference in the consumption at the two first-named institutions is more apparent, when we are told that, while Prestwich drinks twice as much beer as Lancaster, it has only about half as many patients. But it is said that this is only another illustration of the difference between town and country: Prestwich draws its patients from our crowded manufacturing districts, while Lancaster is favoured with a rural constituency. The consequence is that, while Prestwich may want four times as much beer, Lancaster consumes three times as much milk. Last year Prestwich put up with 369 gallons of milk, while Lancaster appropriated 1,027 gallons. The question naturally arises how far beer is suitable for the ordinary consumption of lunatics. One magistrate observed that at the small asylum at Ribchester the inmates were found to be better without beer than with it; and presumably similar results might accrue elsewhere. Anyhow, the subject is one which may fitly be taken up by medical practitioners.”

BEER BREWED FROM RICE.—It appears that the brewing of beer from rice has already assumed large proportions in some parts of Germany. The author has analysed a variety of this beer brewed at Weisenau, near Mayence, from a mixture of 5-6ths of malt and 1-6th of rice. The beer thus produced is very clear, of a pale

colour; the colorimetric test, according to M. Leyser's method, gave as result that the colour of this beer was equal to that of a mixture of 100 c.c. of water and 1·2 c.c. of decimal normal iodine solution, while the colour of the Munich beers average from 3 to 3·5 and even 4·9 c.c. of the iodine solution alluded to in 100 c.c. of water. The taste of the rice beer is extremely pleasant, very mild; it foamed strongly, yet retained its carbonic acid well. Specific gravity = 1·0238. The beer contained, in 100 parts—Alcohol, 3·65; sugar, 1·63; dextrin, 5·13; protein compounds, 0·37; mineral matter, including 0·0775 phosphoric acid, 0·22; loss, 00·1; total quantity of extract, 7·36 per cent., being made up, in 100 parts, of—Sugar, 22·15; dextrin, 69·70; protein compounds, 5·03; ash (including 1·05 of phosphoric acid), 2·99. In order to give a more correct view of the value of this rice beer, as compared with other beers, the author quotes the following average percentage results of analysis of twenty-one varieties of Bavarian beers recently analysed by Dr. C. Prandtl:—

Munich beers.

	Rice beer.	Ave. range.	Max.	Min.
Alcohol	.. 3·65	.. 3·55	.. 3·98	.. 3·22
Total extract	7·36	.. 6·17	.. 6·61	.. 5·42
Sugar	.. 1·63	.. 1·08	.. 1·38	.. 0·82

—*Chemical News*.

SCIENTIFIC TEACHING IN ELEMENTARY SCHOOLS.—A deputation of the Council of the British Association for the Advancement of Science, numbering some of the most influential names in the cause of education, lately had an interview with the Vice-President of the Council for the purpose of urging the advisability of including elementary natural science among the subjects for which payments are to be made under the authority of the Revised Code. Nothing could have been better than the way in which the reasons for this being done were set forth in the document prepared by the deputation; and we cordially agree with the object

they had in view. It has been far too much the habit of people in this country to instruct children in various subjects without regard to the usefulness of the information afforded, or the future benefit likely to ensue from it. We are far from saying that Mr. Gradgrind's view, consisting of an exclusive "grinding" at facts, expresses an adequate or correct system of education; but to take the lowest ground, regard ought to be had to the fact that the children will one day have to gain their own livelihoods. To this end, elementary information in certain well-defined subjects, such as physical geography, physics, chemistry, and physiology, cannot fail to be of importance. They will be constantly encountering the facts connected with these subjects in their future lives, and their success and happiness will oftentimes depend upon the knowledge they happen to possess in regard to them. A certain amount of scientific training will, moreover, be the best possible preparation for that technical education of the working classes which has become, as the deputation pointed out, indispensably necessary to the industrial progress of the nation. What an amount of suffering might be saved or mitigated if the most elementary laws of physiology were generally known and acted upon by the next generation of men and women!—*Lancet*.

**DIPSOMANIACS.**—In a supplementary report of the York Lunatic Asylum, Dr. Needham, the medical superintendent, observes that the absence of legal provision for the care and custody of habitual drunkards has forced itself upon his attention with unusual prominence during the past two months. Numerous applications have been made to him for advice and assistance. He has, he says, unfortunately been compelled to reply that the lunacy and general law of this country in no way provides for the care of such persons, although they are clearly unable to take proper care of themselves, and although they exercise over themselves, their families, and their homes,

all those devastating influences which frequently follow in the track of mental disease; but that health, reason, and property, may be alike wasted, without the State thinking it necessary to interfere. That such is the case, appears to him to be anything but conducive to the general well-being of the community. He points out that the law recognises the obligation on the part of every able-bodied man to provide for the maintenance of his family, and to abstain from attempts at the commission of suicide; and that it visits with penalties any infraction of either of these duties. It would surely, then, he argues, not be unreasonable to demand that he shall not wilfully pauperise his family, and hand over his obligations towards them to those who already have imposed upon them similar responsibilities; and that his attempts at suicide which are none the less determined, because they are not conducted upon ordinary principles, shall, at all events, confer upon the State the right to adopt measures for attempting their repression. Dr. Needham expresses the hope that at no distant period the difficulty may be met by the enactment of laws having these objects, but carefully guarded so as to secure the *legitimate* liberty of the subject; and that thus a legal basis may be given for the establishment of inebriate asylums similar to those which have achieved such a marked success in America.—*British Medical Journal*.

**AN AMERICAN TESTIMONY.**—Professor Jacob Bigelow, in a lecture to a class of young men in Harvard Medical School in 1825, of which I was one, uttered words on this subject which have so influenced my practice, that in forty years I have never used or recommended as much alcohol to be taken internally as is prescribed in the Boston City Hospital in one week; and while I have the pleasure of knowing that I have never made a drunkard by precept or example, I have equal assurance that no patient of mine has ever had an additional hour of sickness for the want of alcohol in any form. Dr. Bigelow's

words were these:—"Alcohol is highly stimulating, heating, and intoxicating, and its effects are so fascinating, that when once experienced, the danger is that the desire for them may be perpetuated. Many patients have become gradually and imperceptibly intemperate under the sanction and guidance of a physician. These assertions are denied only by those whose practice makes a denial necessary for justification, and they are as true in relation to hospital as to private practice; and being true, the inference is irresistible that scores of intemperate drinkers are made every year by the practice of giving convalescents alcoholic beverages. They feel better for a while after a glass of wine, or ale, or whisky, and having 'the sanction and guidance of a physician' they continue the habit after leaving the hospital, with a determination perhaps to discontinue it as soon as they recover their strength; but unfortunately they never recover so as to be able to do without their beverage, or at least so as not to make ill-health an excuse for continuing the habit, and it grows upon them till they go down to a drunkard's grave, cursing perhaps the doctor who first set them on the road to destruction. Such cases I have frequently seen, and have heartily thanked God that such an awful responsibility never rested on me."—*The Philosophy of Eating*. By Albert J. Bellows, M.D. 4th Edition, page 283.

**INTEMPERANCE AS A CAUSE OF DISEASE IN THE ARMY.**—In the Blue-book just issued by the Army Medical Department, we find this subject alluded to by several medical officers. Inspector-General Paynter, C.B., reporting on the sanitary condition of the troops at Malta, expresses a strong opinion that drinking to excess is a fertile cause of disease at that station. So much impressed is he with the fact, that he attributes a very great majority of the admissions into hospital to the effects, either directly or indirectly, of intemperance. Deputy Inspector-General Bowen writes to

the same effect from Bermuda. He does not think the sale of spirits at canteens desirable, believing that it encourages spirit-drinking. The craving for stimulants, referred by many people to the depressing influence of the climate, he considers, with a good deal of justice, to be mainly attributable to the effect of habits developed, if not engendered, by the facilities afforded to the soldier for obtaining spirituous liquors—habits that might be contracted anywhere else, though the effects would not be everywhere so injurious. Malt liquors are not procurable at these stations at reasonable prices; and commanding officers naturally fail to perceive the utility of prohibiting the sale of spirits at the canteens when the soldier can procure any amount of them at the numerous low public-houses and spirit-shops that are the curse of places like Malta and Bermuda. It is really time, we think, that these places should be diminished in number, and subjected to some control. They compete with one another in supplying cheap and adulterated liquors. We understand that the system, lately introduced, of weekly payments to soldiers serving at home, as a substitute for that of the daily pay, as heretofore practised, does not work well. It is said to have led to an increase of intemperance, and, as a consequence, to an increased amount of sickness and crime, of relatively petty or trifling character it is true, but not the less real on that account. The practical working of the system of weekly payments in the Marines, we believe, proved satisfactory; but, from all we can learn, this has not been the experience of line regiments.—*Lancet*, May 27.

**PHYSICIANS AND TEMPERANCE.**—It is related of a certain physician that upon being asked by a patient, "Whether he did not think a little whisky now and then was a good thing?" he answered with much emphasis, "Never, sir, never!" and then proceeded to tell how he had watched the growth of appetite and striven in vain to arrest the downward steps of drunkenness many a time, when the

victims had first acquired the taste which produced such dreadful results from the stimulants prescribed by their physicians. We are glad to find that the attention of the medical profession is being directed to that important subject, and we commend to the attention of all our readers, especially of physicians, the following well-timed suggestions, which we copy from the opening address of Dr. Mendendall, the President of the American Medical Association, at the twenty-first annual meeting of that body. Says Dr. Mendendall:—"Many a drunkard can date his first step in intemperance from the advice and medicine given him by his physician. As conservators of public health, and guardians of the mental and physical hygiene of the people, it may well be a subject for our deep and earnest attention, whether we can do more than we have done and are doing to prevent the gigantic evils attendant upon the use of alcoholic stimulants and of opium: whether we can, in our therapeutic administrations of stimulants and preparations of opium, particularly in chronic diseases, find substitutes, or make combinations that may diminish the liability to form tastes or habits incompatible with the highest welfare of our patients. The growing popularity in the use of narcotics by hypodermic medication, in chronic and slight cases, may well be brought under the same inquiry. Far be it from me to impugn the motives or criticise the judgment of professional brethren. I cannot, however, but feel that it is quite possible for us to jeopardise the best ultimate interests of the sick by the frequent prescription of stimulants, which is peculiarly one of the notable features in practice at the present time. If we are doing this when avoidable, we are taking a fearful responsibility with those placed under our care, the evils of which may be developed and last long after we are mingled with the dust of the earth. I suggest that we consider this subject carefully and then act in the light of experience and of conscience."

THE NEMESIS OF ALCOHOL.—Dr.

Boyd Mushet writes:—As an appropriate pendant to the condemnation of tobacco by Kerckringius, cited by Dr. Embleton in the *Journal* of November 26th, may I quote a graphic objurgation of our countryman, John Allen, M.D., F.R.S., on the Evils of Alcohol? (*Synopsis Universæ Medicinæ Practicæ*, Amstelodami, MDCCXXX. cap. xvi.)

"There remains another sort of poisons, such as vinous spirits and intoxicating distilled liquors. The frequent and excessive tipping of these, as is the practice of each returning day, hath destroyed myriads of mortals, nay, hundreds of thousands, more than all the poisons put together; whence I am wont to style this most pernicious evil emphatically THE HARM. It proves not only the parent of very many, and those the worst of diseases, but to numbers suddenly fatal; upon which accounts, if it deserve not the appellation of poison, I must confess I know not what does. Spirit of wine, taken inwardly, is death to almost all creatures; to vegetables of all denominations without exception, when applied by way of pabulum, even to the parent vine, whence itself is derived. The generous physician hath an unpleasant task upon his hands. Men addicted to these spirituous liquors abominably sacrifice day, night, and themselves, to continually sipping, as it were, a liquid fire. When all digestion is lost, the solids unbraced, the juices corrupted; when the human fabric which hath been long tottering, is just falling to the ground—then are we called in to its support. What must we do? Even as town-scavengers (*scabini*); and ten to one but, after all the discharges made, after the emptying chamber-pots (*lasana*), and close stools (*scaphia*), the abandoned sot returns at once, like a sow that is washed, to wallowing in the mire. Thus he irrevocably prostitutes his health to the last, being prodigal of that life of which he ought to be most tender; and his early end is the consequence of intemperance. What advantageth then the doctor, and what the divine? Fruitless would be

the endeavours even of a Luke himself in both his capacities, either as physician or as evangelist. Deaf as a rock to all counsel or persuasion, he runs into the very arms of death, and courts destruction. To this he is prompted by an eternal thirst, which he greedily indulges; and the greater the indulgence, the greater the thirst—the thirst of those pernicious distilled liquors, with which the tragic scene is expeditiously closed; and the dismal catastrophe, in the last moments, is the finishing both his bottle and himself.”—*British Medical Journal*.

**STARTLING STATISTICS.**—Dr. Cartwright, of New Orleans, gives to the reading world, the doctors especially, through the *Boston Medical Journal*, the following sad history of the influence of drinking habits among physicians: “The writer is one of the three physicians who located in Natchez thirty years ago. The newcomers found only *one* practitioner in the city belonging to the same temperance school with themselves. The country and villages within fifteen miles around afforded only *three* more. All the rest believed in the hygienic virtues of alcoholic drink, and taught that doctrine by precept and example. Besides the practising physicians, there were ten others in the city and adjacent country who had retired from the profession. They were all temperate. Thus, including the newcomers, the total number of temperance physicians, in and near Natchez, thirty years ago, consisted of seventeen. Of these, five have died: Dr. Henry Tooley, aged about seventy-five years; Dr. Andrew McCreary, aged seventy; Dr. J. Kerr, sixty; Dr. William Dunbar, sixty; Dr. James A. McPheeters, forty-nine. In 1823, the average age of the seventeen was about thirty-four years. According to the Carlisle tables of mortality, and those of the Equitable Insurance Company of London, seven instead of five would have been the ratio of mortality in England. Those at present living are Drs. D. Lattimore, W.

Wren, Stephen Duncan, James Metcalf, W. N. Mercer, G. W. Grant, J. Sanderson, Benjamin F. Young, T. G. Elliott, — Phoenix, Professor A. P. Merrill, and the writer. On the other hand, every physician of Natchez and its vicinity thirty years ago, whether practising or retired, who was in the habit of *tippling*, as the practice of drinking alcoholic beverages is called, has long been numbered with the dead! Only two of them, who were comparatively temperate, lived to be grey. Their average term of life did not exceed thirty-five years, and the average term of those who were in the habit of taking alcoholic drinks frequently between meals and on an empty stomach, did not reach thirty years. In less than ten years after they commenced practice, the most of them died, and the whole of them have subsequently fallen, leaving not one behind in the city, country, or village, within twenty miles around. To fill the places of those who died or retired from the profession, sixty-two more men settled in Natchez and its vicinity between the years 1824 and 1835, embracing a period of ten years; not counting those of 1823 already mentioned. Of the sixty-two newcomers, thirty-seven were temperate, and twenty-five used alcoholic beverages between meals, though not often to the extent of producing intoxication. Of the thirty-seven who trusted to the hygienic virtues of nature's beverage—plain, unadulterated water—nine have died, and twenty-eight are living. Of the twenty-five who trusted to the supposed hygienic virtues of ardent spirits, all are dead except three, and they have removed to distant parts of the country. Peace be to their ashes! Though mostly noble fellows, misled by the deceitful siren, singing the praises of alcoholic drinks, to live too fast, and to be cut off in the outset of useful manhood, it is to be hoped they have not lived in vain; as by their sacrifices science has gained additional and important proof of the fallacy of the theory which attributes health-preserving properties, in a Southern climate, to alcoholic beverages in any shape or form.”

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Original Contributions.

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ON THE DUTY OF MEDICAL MEN IN RELATION TO  
THE TEMPERANCE MOVEMENT.

*By A. H. H. McMURTRY, M.D., Belfast.*

THE Temperance Movement, like all other great works of reform, has brought out one of the saddest features of fallen human nature. It has served to show how blind man is to his own best interests,—how utterly opposed he is to anything that would interfere with the free and unrestrained indulgence of his animal passions. How difficult has it ever been to persuade men to prefer the good to the bad, the true to the false, the light to the darkness! What a humiliating, and, to a reformer, perplexing fact it is, that men who know or might know the right, deliberately pursue the wrong; and that, in the hardness of their hearts and stiffness of their necks they despise and reject all schemes for their moral and spiritual elevation! There is hardly anything more calculated to grieve a good man than to witness the folly and infatuation of those who, to their own hurt, try to thwart his benevolent designs or spurn away the blessings which he offers them. What more fitted to excite our pity than to see our fellow-men obstinately and wilfully blind to their danger, their duty, and their real good! Not more sharp is the pain of “benefits forgot,” than that of needed benefits refused. Our Saviour shed tears of sorrow and compassion because Jerusalem did not and would not know the things which belonged to her peace. And how bitterly does the true philanthropist often lament that insane prejudice which blinds his deluded fellow-men to the things that pertain to their physical and moral advancement! How often during the last forty years has the Temperance reformer had to bewail the terribly fatal stupidity of those who, despising alike

the warnings of Scripture, the teachings of nature, and the lessons of experience, yield themselves up the willing dupes and victims of the mocker, alcohol! And not only has he had to bear the mortification of being met with a direct refusal of, and contempt for, his good offices, but he has had to endure the chilling influence of cold and indifferent spectators, the hostility of malevolent opponents, and the provoking remonstrances of those "miserable comforters" who are for ever pointing out to him how he is creating difficulties for himself, by the injudiciousness, in mode or time, of his temperance advocacy; or telling him that he is engaged in a hopeless and impossible task, and wasting his time and energies in a wholly utopian, however well-intentioned, enterprise. With all these discouragements from so-called friends and open foes, what could have sustained him in his noble work, or saved him from despair in the prosecution of so unpopular an undertaking as that of benefiting an unwilling race, but a disinterested and unconquerable love of his species, and a well-founded conviction of the truth of those doctrines which he beseeches them to believe and accept? For truly, but for that philanthropy and that conviction which never fail him, the slow and almost imperceptible progress of the Temperance movement would almost warrant him in giving up the unequal contest. Notwithstanding many years of anxious thought and earnest labour, the people still err through wine, and through strong drink are out of the way. Even the priest and the prophet err through strong drink, and all tables are full of vomit and filthiness. Hundreds of breweries and distilleries deluge the land with their poisonous liquors, and tens of thousands of our countrymen go down in the pestiferous flood. The prayers and the labours of Temperance workers seem to have been employed in vain against a foe which, in spite of all that has been done or attempted, is draining the nation's life-blood away. The enemy is still in our midst, as haughty and malignant as ever, and nearly all that we have been able to do has been to discover and lament his great strength. But even this is something. The knowledge of the difficulties of our task, and of the strong points of our enemy's defence, is the first, and one of the most essential conditions of success. It matters not that there is a regular army of 170,000 men (publicans), with almost unlimited resources, opposed to us; it matters not that they are thoroughly armed and organised, and that their movements are directed by strategists of great skill; it matters not that they are united as one man in their aims and efforts, and are determined to retain, if not extend, their already conquered territory; it matters not that they care little for the lives and happiness of their fellow-men. Doubtless all these things are against us; but knowing as we now do, and

as I shall try to show, "wherein their great strength lieth," it becomes our duty and our policy to bring our forces to bear upon this one position, and, if we make a persistent and combined attack upon this, I am persuaded that all their other advantages will avail them little. There are various other strongholds (which I shall mention presently) which it will be necessary for the Temperance army to storm before it can attain to final victory; but the strongest and most important one of all, because it is the key of all the rest, is what may be called *Fort Medical*. Medical practice, and medical teaching, and perhaps medical silence on the subject altogether, have begotten and fostered the popular belief that alcohol is one of the good creatures of God. The medical profession is responsible for the originating and perpetuating of the great mistake that alcohol is a wholesome thing. If this were so, there would be no need for, nor meaning in, a crusade against it. But this is not so. The very A B C of the Temperance cause consists in this, that alcohol is a poison. That is the very first principle, the foundation, the justification, the *raison-d'être*, of the Temperance reform. And it is the ignorance of the people, encouraged as it has been by the attitude of the medical profession towards the Temperance movement, with regard to the nature, properties, and real value of alcoholic drinks, that has constituted hitherto an almost impregnable barrier to the progress of truth on this subject. This is the first and most important obstacle to be overcome, for not till this is removed can we expect to surmount those that lie beyond it. It lies at the very threshold of our undertaking. Who has put and kept it there? Most certainly the medical profession. For anything that by far the larger number of medical men have done—in fact, in consequence of what most of them have done—the people might be, and the majority of them actually are, ignorant of the fact that alcohol is a poison—that it always and inevitably injures the structures of the healthy body when brought into contact with them. They imagine it is a harmless agent, and as it affords them a certain amount of gratification, they drink it—with what results let every one's experience tell—instead of regarding it as a deleterious thing, and abstaining from it, and so escaping its injurious effects. The medical profession has not, as it was its duty to do, taught the people that alcohol, whether absolutely hurtful or not, is at any rate a perfectly useless article of food or drink; that it neither does nor can do any good to the healthy body; and that the notion that it supports the vital powers, nourishes and strengthens the enfeebled frame, and exerts a preservative influence on the system by which it actually prevents the lighting up of disease, is a delusion and a snare which has been the ruin of thousands. Neither has the medical profession

been mindful of its high mission when it failed to point out the absurdity and the evils of supposing that, whilst its merits as a beverage may have been overrated, it is a medicine of most miraculous power, and so universally applicable and useful as to constitute it a panacea which may be safely prescribed by almost anybody for almost anything. And this delusion regarding the harmlessness or actual usefulness of alcohol as a beverage and as a medicine is held by such a large number of the people that comparatively few are left who discard it altogether as a noxious thing, pure and simple. And the result of this almost universal belief in the medicinal and dietetic *virtues* of alcohol is an almost universal belief that it is *right* to use it. Hence the support which the Church, or at least professing Christians, give to the liquor traffic, constituting *Fort Ecclesiastical*—the second in natural sequence and in importance of the strongholds to which I have referred. From this almost universal belief that it is *right* to use it, naturally follows its almost universal *actual use*. Hence the drinking customs of society, forming the third stronghold of the spirit-trade, or *Fort Social*. And from this again arises the almost universal demand for it. Hence the licensing of the manufacture and sale of alcoholic liquors, forming what may be called *Fort Legal*. Here we have the entire traffic supported and protected by four great fortresses, of which the first is the key of the other three; for if that could be stormed, these would very soon have to surrender. And with shame be it said, that this powerful and all-important stronghold, behind which the whole army of liquor-dom shelters itself, has been built, armed, and manned by the noble profession of medicine! For the extensive use of alcoholic drinks and its co-extensive evils are attributable mainly to the existence and propagation of the great and fundamental error that alcohol is a necessary medicine, a useful beverage, and at any rate a harmless luxury. This is the great delusion for which the profession is accountable, and which is filling our land with lamentation and weeping and great mourning. This is the corner-stone which supports the whole edifice of the drink-traffic.

What reply can our honourable profession make to the awful impeachment brought against it by every intelligent student of the Temperance question, that its members, as a body, are the very mainstay of that traffic and of those customs which have brought misery and ruin to so many households, and which constitute a perpetual “carnival of sensuality, crime, and death”? Medical men may deny that they are in any way to blame for the present state of things, but that they are is a simple and easily demonstrated fact, asserted by all who have given much attention to the matter. On the one hand, the people refuse to believe

that intoxicating drinks are injurious in their very nature. On the other, the people's medical advisers either teach, by precept and example, that they are *not* injurious, or manifest an indifference to the evils produced by their use, which implies that they do not think them injurious. It matters little whether it is what they teach or what they do not teach that is the cause of the popular belief and popular custom; for medical men are just as culpable if they do not dispel this error, as if they actually and directly taught it. They are just as responsible for its consequences, because it is their special province and privilege to diffuse that light and knowledge which alone could prevent them. For to whom can the Temperance movement look, to whom should it look, for aid in exposing this pernicious falsehood but to the medical profession? To whom else should a community suffering from the physical consequences of a physical poison appeal, not only for their cure, but for their prevention? And is the medical profession, as the guardian of the public health, faithfully discharging the duty thus plainly indicated? Does it raise a note of warning against the notion that alcoholic liquors are a harmless luxury? and does it show, and act as if it believed, that the use of them as such is the known and preventible cause of a large proportion of all disease? Does it as assiduously inculcate the avoidance and removal of this cause of the drink-plague as it does that of cholera, for instance? Do medical men take any trouble to undeceive those who think that alcoholic liquors nourish the body and support the strength, and who drink them accordingly, "knowing not that it is for their life"? Do they raise a loud and unceasing protest against this wholesale system of self-poisoning, and point out the fatal mistake of supposing that alcohol is a food? Ours has been called a noble, philanthropic, God-like art; can we make good its claims to these epithets so long as we fail to use our utmost endeavours to rid mankind of the ascertained cause, direct or indirect, of nearly all the ills that flesh is heir to? Do we discountenance a habit, founded on false ideas regarding alcohol, which transforms the "paragon of animals," who in action is so like an angel, in apprehension so like a God, into a being whose tastes and aspirations are only earthly, sensual, and brutish? And by doing all this, the medical profession would be simply undoing what it has done. Is not, therefore, its duty plain? Who is to free the world of this deadly error, which is at the root of the liquor-traffic and all its evils, if medical men do not? Who else *can* do it, if they regard it with indifference, as if it were only a trifling error, or actually propagate it, as if it were not an error at all? And yet, notwithstanding this delusion and its lamentable effects, and notwithstanding the obvious duty of medical men to dispel the one and thereby prevent the other,

how few members of the "healing art divine" seem at all concerned at the loss of health and life occasioned by this unnecessary and suicidal use of alcohol! How few of them seem to be aware that they are responsible for the evils arising from an ignorance which it is in their power, and in theirs chiefly if not only, to dispel! Surely they cannot believe that they are mere functionaries who have to do only with the body and its ailments, and that anything beyond this is out of their province? Surely they do not hold that "wicked and inhuman doctrine, that it is no matter what happens after them"? that they are any less responsible for the moral consequences of their acts or their omissions, professional or otherwise, than other people? or that they are any less bound to discharge those moral obligations belonging to them as *men*, because they have certain official duties as *medical men*? In view of the havoc that drink makes among our fellow-creatures, should not our sympathy and our humanity be wide enough to enable us to say,

"Homo sum,—nihil humani alienum a me puto"?

Or are they to be only in proportion to the liberality of those who require our aid? I know that our profession can compare favourably with any other as regards the amount of gratuitous, and often thankless service it bestows upon the sons and daughters of affliction; but even gratuitous service, when needed, is nothing more than the duty of all who can render it, and it is none the less so because it may not lie exactly within their usual sphere. The question is, Is help required, and can we give the required help? If so, we may, like the priest and the Levite of old, unfeelingly pass by on the other side; but it is only the Samaritan who shows mercy on the needy sufferer, just because he is needy, that acts the part of a true man and a brother. Thus would I try to arouse my brethren to a sense of their duty in relation to the Temperance movement. As *medical men*, possessed of the knowledge for lack of which the people are perishing, and as *men*, bound, like all other men, to benefit to the utmost extent in their power, not only themselves, but all their race, they are specially obligated to employ, in the interests of humanity, both their ordinary and their extraordinary qualifications to remove one of the greatest curses of mankind.

But here some one will object that what I have taken for granted is not proved. I have been assuming that alcohol is a poison—always hurtful as a beverage, always useless as an article of diet, and always unnecessary, at the very least, as a medicine. I have been assuming that the medical profession knows all this, but has allowed the people to remain in ignorance of it, to their great injury, and that therefore the medical profession is respon-

sible for the consequences of this ignorance. The objection is, that medical men do *not* know all this, but positively deny some of it. Now, admitting for the sake of argument that they do not know what I have supposed they knew, I reply that they *might* know it, if they would, and that they are as responsible for the knowledge they might and should possess as for that which they already do possess. Where a man's ignorance is inexcusable, the results of it are also inexcusable. It ought to be known to all medical men that a large and increasing number of earnest and scientific inquirers have discovered, after patient investigation, careful experiment, and close observation, that alcohol is incapable of contributing anything whatever to the nourishment of the body, and that disease can be even more successfully treated without it than with it. This being so, have medical men who have no *reason* to doubt it any *right* to doubt it? Have those who have never put the matter to an adequate test any right to dispute the opinion of intelligent and conscientious observers, who, animated by no other desire than to know the truth, and having examined both sides of the question, have been compelled to deny both the virtues of, and the necessity for, alcohol? Could anything more absurd or more unjust be conceived than to affirm the impossibility of a thing which you have neither tried nor examined, and that in the face of the clearest evidence to the contrary? What stronger proof of prejudice or of stupidity could be desired than is found in the obstinacy with which the majority of medical men deny that fever can be treated not only as well but much better on the non-alcoholic plan, when they have never sufficiently tried it, and when large numbers who *have* tried it assert the fact? What better proof can be given that a thing *can* be done, than that it *has been* done, and is being done every day? If the experiment has succeeded, ought not that to settle the question? And that the experiment has succeeded, the reports of numerous eminent and experienced physicians abundantly testify. Surely common sense will tell any candid mind that, *cæteris paribus*, the men who have given the subject the fairest and most extensive investigation are the most competent to offer an opinion upon it; and common justice requires that this opinion shall be respected and acted upon in preference to one which has not equally trustworthy evidence to support it. Hence I maintain that it is the duty of medical men either (1) to discard alcohol altogether, on the strength of the verdict which a large portion of the profession (not to mention competent judges outside the profession) have pronounced against it; or else (2) to examine the matter for themselves with an earnest and sincere desire to know the simple truth. Considering the incalculable evils which so many truthful, unprejudiced, and thoroughly quali-

fied men attribute solely to the common and medicinal use of alcohol (such use being founded on false notions of the nature and real value of the drink), I hold that it is the bounden duty of all who are in any degree responsible for this use of it, to give the whole subject that honest and attentive consideration which its importance demands. This would be a more philosophic, honourable, and philanthropic course to pursue than that so often adopted by medical men, of refusing either to study the question for themselves or to be instructed by those who have studied it. I should have thought that, if no other or higher consideration were sufficient, the honour of their profession would be enough to arouse them to defend it from the serious charge of contributing, either knowingly or in wilful ignorance, to the miseries of the human race.

But suppose that, after having given the subject the necessary investigation, they still believe that alcohol is an indispensable article of the "*Materia Medica*," what then? What if some medical men *have* actually done so, and have been forced to the conclusion that alcohol is a useful food and a necessary medicine? Then I tell them that it is their duty (3) to choose the lesser of two evils. Prescribe alcohol, either dietetically or medicinally, and you frequently create or resuscitate, and always run a risk of creating or resuscitating, supposing the patient survives, an uncontrollable and ultimately fatal appetite for intoxicating drink. Thus in your desire to cure one disease, which many believe could be cured more certainly and more safely by other means, you administer a remedy which may and often does produce another disease of a much more serious character, inasmuch as it involves not only physical but moral injury to the patient, and untold misery to his friends. You also give rise to, and confirm, that widespread faith in the necessity for and remedial powers of alcoholic liquors, which I have said is at the very basis of the drinking customs, and is the remote origin of the traffic itself and all its evils. For while I do not say that all who drink do so because they think the drink is good for them, I do say that all *begin* to drink ignorant of the fact, and because they are ignorant of the fact, that alcohol is inherently and essentially bad for them. And this ignorance is the result of the prescription and recommendation by medical men of the various intoxicating productions of the brewer and the distiller. And remember that the advocates of alcohol can claim no special advantages for the alcoholic treatment which are not also claimed to a superior degree for the non-alcoholic treatment, by those who have expunged this agent from their list of remedies altogether.

What, on the other hand, are the evils which it is alleged would arise from the entire prohibition of the internal use

of alcohol in any form or for any purpose? Perhaps retarded recovery now and then, and in some cases no recovery at all (both of which, mark you, have been known (!) to follow even when alcohol was used), with, it may be, some little unpopularity for the medical attendant. This is all that can be said against the disuse of alcohol. But then, as a set-off to this, you will have all those infinitely greater evils arising from its use, which I have pointed out, entirely prevented. Now, which of these alternatives should commend itself to the conscience of such humane men as the members of the medical profession generally are? Unquestionably the latter. It is better, if necessary (although I must remind the reader that I don't admit the necessity), to risk the health and lives of a few than the health and happiness and lives of the many. It is better to insure the safety of the many than to render it insecure for the sake of conferring a very questionable benefit on a few. And physicians ought to remember that they have more than their patients or the *present* condition of their patients to consider. They have to consider the moral effects of their treatment on the community at large, and the *future* moral and physical effects of their treatment on the patients themselves. I have been told that medical men have nothing to do with the moral effects of a treatment which they conscientiously believe to be proper and necessary; and that if a patient chooses to make it a pretext for becoming a drunkard that is none of their business; it is a matter between him and his Maker. But if the medical treatment makes him that he *cannot but choose* to be a drunkard; if it produces a physical disease which robs him of the power to abstain from alcoholic liquors, then it does become the business, and the very serious business, of the medical man whose treatment produced this disease. If any act of the physician has had any influence for evil on the man's conduct, or on his capability of regulating his conduct, and especially if it is known beforehand that that act *may* have this influence, then I hold that the physician is morally responsible for the man's misconduct, and morally bound to refrain from repeating such an act, even though, as in the case of the medical prescription of alcohol, it may be *intended* for the man's benefit. From these considerations alone, I think the conscience of every medical man must tell him that the only proper use of alcohol is its entire *disuse*.

But if the superior importance of the present physical well-being of an individual to his future physical and moral well-being and that of the community demand that alcohol be used at all hazard, is it not the duty of medical men (4) to reduce the hazard to a minimum by a more careful and scientific *mode* of using it? If alcohol is a poisonous drug, why should it not be prescribed

in the same way, procured at the same place, and employed with the same care, as other powerful and dangerous medicines? Why should the patient, or even his friends, know that it is prescribed at all? Doctors write out a Latin prescription for other medicines, and never think of telling their patients the names of the various ingredients. Why not do the same with regard to alcoholic stimulants? Why teach society to regard the public-house as a necessary adjunct to the apothecary's shop? Should not the apothecary's shop be sufficient? And, then, what could be more random and unscientific than the way in which these drinks are allowed to be used? It is almost always left to the discretion, or indiscretion rather, of the patient himself, to settle what the dose and its frequency shall be, and how long the remedy is to be taken! Is it any wonder that, with such a system of treatment as this, many become drunkards before they are cured, or that many refuse to be cured at all, as that would necessitate the giving up of a fascinating medicine? Medical men might do much, even in small matters like this, to guard their patients and the general public from the contraction of drinking habits, and it is their duty to make use of every means calculated in any degree to counteract those evils which have resulted from their teaching and practice in the past.

And are they not called upon, above all others, to aid the Temperance cause by (5) personal total abstinence? Apart from the absolute duty of every man to abstain from the unnecessary use of a poison, it is pre-eminently the duty of medical men, who are naturally and justly considered guides in all that pertains to the preservation of health, to see that the powerful influence of their example is on the side of virtue and sobriety. Their superior knowledge of the poisonous nature of alcohol implies a greater obligation to abstain from it; but it is their stronger and wider influence which, in an especial manner, lays them under a deeper responsibility to set the people a safe example in this matter, and incurs upon them a deeper guilt if their example leads the people astray. God's laws, physical and moral, are impartial in their operation; and medical men cannot violate a physical law, or set aside a moral obligation, with impunity, any more than other people. Besides, the nature of their professional duties, the weighty issues dependent, humanly speaking, upon their skill and care, the priceless interests entrusted to their keeping, demand that they shall avoid that which, both Scripture and experience declare, cause men to err in vision and stumble in judgment.

And while they thus draw by example, let them not neglect the frequent opportunities presented to them of disseminating Temperance principles. At the bedside, in the medical society, on the platform, and in the press, they may do much to redeem the

past, by teaching the people the whole truth about alcohol ; by discountenancing the drinking customs ; and by identifying themselves more thoroughly with the advocacy of that great sanitary, social, and moral reform—the Temperance movement.



## CHOLERA : ITS CAUSES, PREVENTION, AND TREATMENT.

WE have much pleasure in reproducing, from the *Medical Press and Circular* of September 13, a very lucid and detailed report of the recent case of cholera in London. This case is of general interest and importance at this juncture, it being reported in detail by a physician who has had large practical experience in the epidemics of cholera that have visited this country since 1849 ; while the case and its treatment, though written for a purely professional journal, are given in such language that the intelligent general reader may clearly understand the details. The description of the case winds up with the following words :—

“The case was certainly one of true cholera, and one in which probably a few more discharges would cause hopeless collapse ; but I learned that he had joined a Band of Hope at ten years of age, and since then had taken no intoxicating liquors, while his parents also were old abstainers. *Of course these antecedents were immensely in his favour*, and being a man of small, lithe, active frame, I thought he would rapidly rally if the effusion of fluid were stopped.”

In closing the report of the case and its treatment, it is significantly added by Dr. Edmunds :—

“The patient took no alcoholic liquor during the attack, or in his convalescence. It will also be observed that he took no drugs except during the first four hours of my attendance, when the sulphuric acid and chloroform were energetically administered.”

After some general observations, in which Dr. Edmunds lucidly sums up the treatment of cholera under six practical points, he shows that, when the evacuations are becoming profuse, the chief object is “to restrain the rapid current of fluid from the blood into the intestinal canal,” and for this purpose he advises the administration of a considerable dose of dilute sulphuric acid after each evacuation. He also shows that the patient’s chance of surviving really depends upon a

“sound constitution, well-conditioned tissues, and vigorous age. . . . Subjects who are aged or weak-hearted, *or whose tissues have been damaged by the use of alcohol*, often die from syncope after discharges that would not have seriously disturbed a healthy subject at an age more tenacious of life. . . . In the epidemic of 1853 I remember a publican and his wife in the Whitechapel district who died in the same night, after a very few hours’ illness from cholera, and with comparatively little purging. But the fact was that they were both past

middle age, and though what is called ruddy and healthy-looking, their tissues were so unsound that they at once broke down under the onset of the disease."

The chance of rallying from an attack of cholera, or indeed of any other disease, depends in fact upon a high state of personal vitality and upon "well-conditioned tissues," and these qualifications not only carry the sufferer through disease, but, better still, act as a shield and ward off a large proportion of all such attacks to which the individual may be exposed. Of course prevention is better than cure.

We cannot refuse to accept the doctrine that cholera is communicable from the sick to the healthy. The point, however, has been hotly debated, and among those who hold to its communicability much disputation has also taken place as to the precise way in which the disease is communicated. Dr. Snow showed that the disease was generally communicated—horrible to state—by the excremental pollution of drinking water. Thus, cholera occurring in a village, the evacuations would find their way into some stream with the sewage, and from the stream thus polluted towns lower down would become poisoned by ingesting the germs of cholera with their drinking water just as one might ingest the egg of a tapeworm. Again, villages supplied with drinking water from shallow wells near the houses, and whose sewage passes into cesspools or unsound drains near by, would, in a porous soil, have a frequent percolation of sewage matter into the wells, and thus cholera, when once introduced, might poison the drinking water of a whole neighbourhood. This occurred with the notorious well in Broad Street, Golden Square, in the year 1854, when over 500 deaths occurred in the course of a few days within a focus of some 250 yards.

This disease, cholera, burst like a thunderclap upon this country in the year 1832. Perhaps one of the most reliable and unprejudiced testimonies on record in reference to the disease as witnessed in 1832-3, is the evidence given by Mr. Joseph Hodgson, the celebrated Birmingham surgeon, afterwards President of the Royal College of Surgeons, and who was one of the medical men appointed by Government upon the Board of Health in Birmingham at this time. We reproduce the following \* :—

"Birmingham was so free from the disease, that scarcely a case of Asiatic cholera could be said to exist in the town; nevertheless, at Bilston which is only ten miles from Birmingham, it raged more than I believe in any other place in Great Britain. Bilston at that time contained 14,700 inhabitants, of which number 3,568 had cholera, and 742 died in less than seven weeks. One in four of the population had the disease, and one in five of those who had the

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\* *Vide* Metropolitan Sanitary Commission, Second Report, 1848.

disease died. No precautions were taken to prevent the disease spreading between Bilston and Birmingham, and there were communications constantly between the two towns; coaches and other conveyances went through. From Birmingham only 31 cases in all were reported to the Board of Health in London during the whole time that the disease existed in England; a few cases were imported into Birmingham, but it was a most extraordinary thing, that with a population of 180,000, and within ten miles of the very worst seat of cholera, if I may so say, we had so little of it. One physician who went to Bilston from Birmingham to attend the cholera patients there, caught the disease; he came home and died of it in Birmingham.

"The cholera consists of two stages, the premonitory stage, and the stage of collapse, or the Asiatic or spasmodic cholera, or blue stage. The first stage consists entirely of diarrhœa or discharge from the bowels of matters which are fæcal, and generally bilious. This continues for a greater or less time, more or less excites the attention of the patients, sometimes they will have two or three evacuations in the day, but they are of a loose kind; and in other instances they will have half a dozen or a dozen evacuations in the day, and this continues for some time. Almost everybody that I have talked with who knows anything about the subject confirms this remark, that they never knew an instance of a person who had the second stage who had not had the premonitory stage, and since that time this has been confirmed by almost all persons with whom I have had an opportunity of conversing upon the subject of cholera—medical men and others; in nearly every case that I have heard of there has been the premonitory stage, though only perhaps in a very slight degree. I remember hearing of some ladies, who were out at a party one evening, one of whom was dead next day; but even in such instances, if you could learn the particulars, you would find, I believe, that there has been the premonitory stage—the stage of diarrhœa to a greater or less extent.

"During this premonitory stage you may stop the disease at once, and readily, but if it gets into the other stage there is no known treatment upon which any reliance can be placed. . . . Whoever will read what has been done in our profession in the treatment of cholera in its collapsed stage will, I think, say that the medical profession deserves very little credit with regard to it. Every kind of treatment you can imagine—all kinds of opposite modes of practice—were adopted; some bled, some gave salt and water, or mustard and water, some gave brandy, some gave opium, some gave calomel, some quinine, some cajeput oil, some croton oil; others used hot baths, and others cold effusion; and almost every variety of treatment possible was adopted, and each had its advocates; so that it appears to me that in the stage of collapse, when you look at the inconsistency in the medical treatment, the recovery depended upon the vital power of the individuals suffering from the disease. The immense discharge of serum from the blood reduces them to such a degree that they cannot rally. To expect them to rally is like expecting a person to rally from whom nearly all the blood in the body has been drained."

Nothing can be more remarkable than this evidence. Birmingham and Bilston were in constant communication, by canal as well as by road; and the people at Bilston were obliged to send over to Birmingham for coffins, as they could not get them made fast enough in their own town. We need only add that a comparison of the physical situation, the sewage, and the water supply of Birmingham on the one hand, and of Bilston on the other, will show why the disease decimated the one town, but could not take root in the other. Cholera, in fact, is especially one of those diseases that cannot take root except

under localising insanitary conditions, such as induce the excremental pollution of drinking water.

Dr. Snow, however, also showed that attendants upon the sick and other persons of dirty habits got their hands and clothing infected with cholera discharges, and thus in eating their food and otherwise the poison would enter the body just as lead gains entrance to the stomachs of painters and produces lead poisoning. Again, it seems probable that cholera matter when dry may contaminate the air as dust, and so gain entrance by inhalation through the lungs. The practical deductions from these facts are very simple. It is well known that abstainers from alcohol drink very much less water than other persons, in fact they drink only a natural quantity, and they drink it in such form that they are very much more likely to detect or avoid bad water than those who are at the mercy of watered beer or watered spirit—in both of which cases foul water is disguised, though in no way disinfected. Still, polluted water, if drunk raw, does not always betray its pollution, and it behoves every one to avoid drinking water from shallow wells open to contaminated soakage, or from streams open to sewage contamination at a point higher than that from which the water is led. No house, however, is safe without its own filter standing guard over the water as it flows from the cistern tap, and very few of the ordinary filters are worth anything. The filter should be self-acting and continuous, and be fitted inside the cistern. Dr. Edmunds informs us that he has had such a filter in use for years in his cistern, and that it never fails to discharge any quantity of pure and sparkling water, filtered as it flows from the tap.\*

With proper attention to the drinking water, little fear need be entertained as to the invasion of cholera; but as an extra measure of precaution, or in case reliable water cannot be got, one should drink toast-water or other beverages, in the making of which *the water must have been boiled*. Probably the foulest water—though it would remain dirty—would be made safe by the simple expedient of boiling and carbonising it, as in the making of toast-water.

If unhappily cholera is imported by any accident, the sufferers may be attended to without risk if only the discharges are received into a small quantity of common carbolic acid, or a weak solution of coarse wood creosote—a remedy which is the most powerful poison to all germinal matter, and is indeed more effective and, considering its strength, even cheaper than carbolic acid. The

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\* A prospectus, with diagrams, of this filter, may be obtained by writing to or calling at the offices of the General Water Purifying Company, 157, Strand, London.

discharges from the person being thus instantly disinfected, should be carefully flushed into the sewer, and great care should be taken by the attendants so as to prevent any contamination of food. All clothing may be made perfectly safe by mere boiling, if only it be done thoroughly; a little solution of creosote or of carbolic acid should be sprinkled over the clothes, and they should then be put at once into water until they can be boiled. Other disinfectants, such as chloride of lime, corrode the clothing so much as utterly to spoil it. Carbolic acid or creosote do not injure it in the least.

In time of cholera no special diet should be adopted except, indeed, by those who are in the habit of using improper or badly cooked food. A pure, wholesome, varied, well-cooked diet, such as conduces most to vigorous health, is the best protective against attacks of cholera as well as of other disease. If the bowels are disordered, it will be well to avoid red flesh meat, as well as all coarser vegetable and uncooked foods. A simple milk and farinaceous diet for a day or two will probably suffice. If the bowels need to be cleared of irritating matter, a small dose of castor-oil, or of compound rhubarb powder, should be taken in water with a teaspoonful or two of paregoric (for adults only), if there be much colicky pain. In case this does not suffice, and looseness continues at a time when cholera or diarrhœa are epidemic, some absorbent or astringent medicine should be used. The simplest and best absorbent medicine is a small wineglassful of chalk mixture (with a teaspoonful of paregoric in case there be much pain) after each superfluous relaxation.

In case the evacuations become quite aqueous, absorbents and opiates are worse than useless, and if medical aid be not at hand, recourse should be had to the drops of sulphuric acid and chloroform, the prescription for which will be found in the report we reproduce in this number from the *Medical Press and Circular*. Warmth to the surface of the body, and rest, are of great importance in all such cases.



## THE PLYMOUTH BREAKFAST TO MEMBERS OF THE BRITISH MEDICAL ASSOCIATION.

THE National Temperance League has done some rather bold things in its time, and has brought about some remarkable results, but it is questionable whether it has ever attempted anything more important than in calling together the leading members of the medical profession at the annual gatherings of the British Medical Association, and submitting to them for discussion the subject of total abstinence from all intoxicating liquors. If there

was one class more than another disposed to treat teetotalism and teetotalers with contempt or hatred, it was the great body of British medical practitioners. Lawyers despised us, but the medicals went further. For years the organs of the profession either treated us with silent disregard, or mentioned us with the object of turning us and our doctrines into ridicule. This was very grievous, because it was felt that to have the medical profession against us, was to have to encounter the most terrible of all opponents. Many persons were still more pained, in thinking over this subject, because they could not but feel that much of the prejudice of which we were the victims, was really excited by the very unfortunate handling of Temperance doctrines by some amongst us whose zeal outran discretion, and whose powers of speech exceeded their reflective capacity. Teetotalism might well exclaim, "Save me from my friends!" If people will pronounce in a brusque, confident, and oracular manner on questions of physiology, chemistry, or medical practice, which are far from being solved—if they will dogmatise on matters about which demonstration is imperfect or absent—they become objects of pity or scorn to intelligent opponents. It almost always happens that the more ignorant a man is, the more denunciatory is he of those who differ from him. The writer has more than once heard nearly unlettered teetotalers relate the manner in which they have lectured a medical man who differed from them on the subject of the administration of alcohol in disease. What wonder, then, that the great majority of medical men looked on teetotalism with disgust and disdain?

It was under these disadvantageous circumstances that the Committee of the National Temperance League made an approach towards conciliation. The effort was successful beyond anticipation, thanks to the able advocacy of Mr. Edward Baines, M.P., who presided over the first of the gatherings, and to the moderate, lucid, and most interesting exposition of the honoured President of the National Temperance League, Mr. Bowly. The writer was delighted with the manner in which the addresses of these gentlemen were listened to, and commented on, by his medical brethren. As a commencement, nothing could have been more satisfactory. It was evident that the majority of those present at the Leeds Meeting had received new light on the subject of teetotalism, and went away with a considerably changed opinion of teetotalers.

The favourable impression produced at Leeds was well sustained, if not deepened, at the Newcastle Meeting. The Journal of the Association gave an admirable resumé of the proceedings; and as these are carefully scrutinised by large numbers of medical men who are not members of the Association, on the look out for novelties usually produced during the Annual Meeting, the

influence of the discussion would extend far beyond those who listened to it.

The meeting at Plymouth this year must have been very gratifying to its chief promoters. It was presided over by Mr. Bowly in his happiest manner. And here it is worthy of remark that the League is particularly fortunate in its chief representatives on these occasions. Mr. Bowly, though bordering on three score years and ten, gives indications of a vigorous intellect, is courteous and gentle in his demeanour, the picture of good health; his erect figure, fresh complexion, and firm voice, are parts of an irresistible argument in favour of teetotalism. "I have been," said he, "thirty-five years a total abstainer myself, against the advice of my medical man, and with immense advantage to my health. I never felt stronger in my life than I do to-day." The speech was a comparatively brief one, the time at the disposal of the Conference being short; but it evidently excited the hearty approval of most of those who listened to it, if we are to judge from the applause with which it was greeted.

The discussion was very appropriately opened by Mr. Whipple, the President of the British Medical Association. His remarks were conceived in a friendly and sympathetic spirit. He admitted that, except under peculiar circumstances, alcohol might be dispensed with both in health and disease. He showed that severe fatigue might be undergone without alcohol, and, as an example of this, said: "I have travelled 740 miles, from Basle to London, without intermission. I have arrived in London at nine o'clock at night, gone into an hotel at Paddington, had a cup of tea and a little piece of cold chicken; and I can assure you that with one or two cups of tea I could have gone the 740 miles over again. Tea has a wonderful power of invigoration; and I attribute the advantage of tea, so far as I am concerned, to the fact that I am a moderate drinker." This is undoubtedly an interesting statement in favour of "the cup which cheers, but not inebriates."

As regards the administration of alcohol in disease, Mr. Whipple said: "I look upon the use of spirit as a medicine upon some occasions as absolutely necessary. . . . Frequently cases come under our care—some particular cases of fever, for example, where the patient is in a very exhausted condition—where the difficulty is to get them to take as much food as we require. I am quite sure that if we did not use spirits we should lose a number of valuable lives, which are now saved by its use—I mean its use under medical advice."

Now, to the first declaration, few persons having a practical acquaintance with disease will demur. There are special cases in which alcohol is invaluable, just as there are special cases in which arsenic, or opium, or strychnia, fulfils conditions no other agent is known to meet. Every conscientious medical man would

blame the careless administration of any one of these drugs ; and, in the case of opium, not merely on physical, but on moral grounds. Now, where one person is injured by arsenic, five hundred, or a thousand, or even more, are injured by alcohol ; and where one man or woman is led, through the incautious administration of opium, to become a victim, hundreds, through the prescription of alcohol in some of its forms, are made drunkards. The unfortunate patients become a curse to themselves, and to all who are connected with them. What wonder then that medical men are sometimes passionately appealed to, and urged to abstain from the prescription of alcohol, save except when no other drug would save life or relieve from agony.

With regard to the President's declaration that he is "quite sure" that a great many valuable lives would be lost which are now saved if spirits were not used in certain cases of fever, it may fairly be asked, Is it not, to say the least, equally certain that a great many valuable lives would be saved which are now lost if, in fever cases, cold water ablutions and milk diet were substituted for alcoholic administrations ?

The next eminent man who spoke on the occasion was Mr. Jonathan Hutchinson, Senior Surgeon to the London Hospital. His speech was brief, but thoroughly practical. He threw out a hint which, if adopted, will be productive of extremely valuable results. He suggested that the British Medical Association might undertake some work in reference to the collection of statistics relating to the administration of alcoholic liquors in hospital practice. At his suggestion two years ago a commencement was made at the London Hospital: tables are kept, showing the amount of alcoholic stimulants administered to each patient, and the results of the cases. He declares that there has been no advantage on the side of those who use stimulants largely, and that during the past year the advantage has been very decided the other way. In his own practice he has very great faith in the milk regimen. He had already stated that whilst his friends believed in pouring in alcohol, he always found himself on the Temperance side. Mr. Meade, a hospital surgeon of twenty-five years' standing, had stated that pyæmia (poisoning of the blood by pus or matter) or diphtheria could not be successfully treated without stimulants ; but Mr. Hutchinson intimated that he succeeded better with milk, in cases of erysipelas and pyæmia, than by the usual free exhibition of stimulants.

Dr. Radclyffe Hall's speech was interesting, inasmuch as it showed the tendency there is on the part of many medical men to give up the practice of what Mr. Hutchinson called "pouring in alcohol." Instead of ordering an ounce of brandy every two hours, he allows a teaspoonful. "I believe," he said, "that in many instances, instead of pouring in large quantities of spirit,

we may give large quantities of milk with small quantities of spirit." Of course this is the next best thing to giving plenty of milk without any spirit. He declared strong bitter beer to be a most pernicious thing, when taken on an empty stomach. Still, as he said, "the slang of the time is, 'I believe in bitter beer.'" He is in the habit of recommending his patients to take light claret, instead of the highly-alcoholised sherry. "You can get them," said the speaker, "to do this when you cannot get them to stop altogether."

The discussion was brought to a close by Mr. Wm. Square, Surgeon to the Plymouth Eye Infirmary, in a speech full of noble sentiment and manly impulse, which evoked hearty applause. He said: "I quite agree with what has been stated by Mr. Bowly, and I do not agree with the theory put forward by the last speaker. If a man has been in the habit of taking too much, he must be stopped. It is of no use talking to him about light wine, for if he takes it he goes on in the same way. We are members of a noble profession, and let us practise something like self-denial; let us, if leaving off drink does not hurt us, show that it does not, for the sake of example, in order that we may benefit those around us. If we can only in this way save one man, it is a great thing; but if we can save ten it is a greater. Thank God, I know that many through my example have been saved." He concluded by saying: "My father was a grand man—a noble man—a finer man than any one here, but he died at the age of forty-two, a victim to intemperance. I know well what the evils of intemperance are, and I call upon all my fellow medical men to do their utmost to stay its ravages." It is to be hoped that this eloquent appeal will not fail to produce salutary results.

If medical men were more alive to the frightful evils produced by drink, if they were more deeply imbued by a spirit of patriotism, had they more of the milk of human kindness, more pity for their suffering countrymen and countrywomen, they would be less disposed to tamper with the great destroyer alcohol, and more anxious to find a substitute for it in their practice. The testimony of Mr. Hutchinson, one of the ablest men who addressed the Conference, and a surgeon having a large field for observation, goes to show that this may to a very great extent be done. The experience of a physician who has seen extensive practice in typhus and other forms of disease—Dr. Gairdner—goes to prove that the mortality amongst fever patients diminished almost *pari passu* with the diminished administration of alcohol. It is not, however, to be expected that the cherished customs and traditions of a class can be got rid of at once, and if there are signs of reform we must feel thankful and encouraged. The National Temperance League is sowing its seed, and already there are indications that it has taken root. Let them go on, and final success is certain.

## DRINK AND DISEASE IN THE ARMY.

THE "Army Medical Department Report" for the year 1869, lately published, gives, among other useful and interesting information, some notices of the effects of intemperance on the sanitary condition of soldiers; and, although this information is very far from complete, and mainly relates to the direct and obvious effects of alcohol, a general summary of it cannot fail to be instructive. We propose, therefore, to give a few extracts relating to this important subject, and some of the opinions of those medical officers who have directly reported on it.

It may be premised that the soldier starts in his career under conditions of at least average constitutional health; for out of 17,749 men medically inspected in 1869, with a view to entering the army, 6,660, or about 375 per 1,000, were rejected as not coming up to the required physical conditions—a result almost identical with that of the preceding year. And yet, for every 1,000 men, there are 1,136 annual admissions into hospital, from 16 to 17 deaths, 23 to 24 discharged as invalids, and from 50 to 51 constantly non-effective from sickness. These averages are computed on a mean strength of about 75,000 men, whence it may easily be seen how formidable are the actual figures.

The term "intemperance" does not occur so frequently in this Report, because all such cases of medical treatment are now classed under the head of "poisons"; and we are informed that, in the United Kingdom, "the admissions by this class, 227 in number, with the exception of one case of accidental poisoning by oxalic acid, were all under the head of 'delirium tremens.' They amounted to 3 per 1,000 of the mean strength. 9 of the cases died; and there were also 4 deaths recorded from the direct effects of drunkenness."

The written sanitary reports from the various camps and stations contain no information or remark, except in the case of Shorncliffe, relative to which it is stated: "The number of cases of intemperance admitted into hospital has not been large, due it may be considered to two causes, viz. more regular and temperate habits, but mainly to the absence of adulteration in the liquors sold at the canteen." This latter "cause," however, is in operation in almost every station where soldiers are quartered, and, as a rule, it may be fairly assumed that this being equal, any difference is mainly due directly or indirectly to a higher average tone of morality.

From Gibraltar we read: "The admissions by this class were high; but three-fourths of the cases appear to have been included through a misapprehension, and to have been not cases of alco-

holic poisoning, but such as were under the old nomenclature returned under the head of 'intemperance.' The cases of 'delirium tremens' were 21 in number, in the ratio of 4.5 per 1,000 of the strength, and very slightly above the average of the preceding year."

The report from Malta is: "Under the head of poisons, 39 cases and 5 deaths are entered, all of delirium tremens." One death caused by a man throwing himself over a gallery in a fit of delirium tremens is recorded under the head of "accidental injuries."

From Canada there are reported "81 cases and 2 deaths from delirium tremens." There were also 4 suicidal deaths in this command.

Bermuda furnishes "70 cases and 1 death by delirium tremens."

The number of cases in the West Indies amount to 53, besides 26 of delirium tremens, and 2 deaths from the same cause.

From St. Helena and the Cape of Good Hope, taken together, there are 62 cases and 1 death, besides 3 admissions and 1 death from suicidal attempts.

The Mauritius furnishes 14 cases and 1 death. Ceylon, 32 cases of delirium tremens, 14 of alcoholic poisoning, including 1 death: 1 suicidal death is reported.

In Australia and Tasmania occur 7 cases of alcoholic poisoning and 1 death.

New Zealand gives 12 cases. It is remarked that "diseases of the digestive system were most prevalent," "a large number of cases of dyspepsia, probably a result of intemperance."

From China are reported 16 cases and 1 death, all delirium tremens.

Japan furnishes 16 cases of delirium tremens, and 1 death of a man reported as "suffocated when drunk." One case of suicidal death also occurred.

Straits Settlements, 9 cases and 1 death from delirium tremens.

India supplies 409 cases, 17 deaths. In addition, there are 17 deaths from suicide.

On board ship, to and from various stations, there occurred 3 cases, 2 deaths, and 2 suicides.

The approximate summary of the above facts amounts to this, that there were about 1,040 cases treated in hospital from the known and evident effects of drink; that, in addition, 48 men died from these effects, and that 25 men committed suicide. It is not stated that all these last were under the immediate effect of drink, but it is well known that drink is a powerful predisposing cause.

A further examination of this Report shows the great prevalence of diseases of the digestive organs, so often the consequences

of drinking habits, and the loss to the country of the services of many men in hospital for various periods from diseases connected with a dissolute life.

Writing from St. Thomas Mount, Madras, the medical officer states: "I am more than ever impressed with the belief that intemperance prevails to a considerable extent. Several of the cases admitted into hospital have directly resulted from this cause, while many others have been directly traceable to its effects; for, independent of the hepatic affections admitted, of which intemperance in too many cases may be assigned as a predisposing cause, it is to this one that a large proportion of the admissions from disease of the enthetic order may be indirectly credited."

Wellington, Madras: "Although actually only 33 cases admitted into hospital here have been traced to the direct and indirect influence of indulgence in liquor, yet I have but little hesitation in stating that almost every case of dyspepsia, some of fever, and many of cephalalgia, have been either induced or aggravated by intemperance."

Mysore Circle: "It must be stated that a large proportion of the admissions into hospital have been due to intemperance, as well as nearly all the crime."

It is not necessary to multiply evidence on this head, as the connection between drinking habits and certain forms of disease is generally understood.

Surely these figures and facts call on every thinking man in, and not in, the army to use every exertion to lessen such a frightful loss of life and health. We trust that, when the sanitary history of 1872 is written, the labours of those connected with the great movement in favour of total abstinence among soldiers of all ranks will indicate a turning-point in this sad history. For while improved arrangements and legal enactments are heartily to be welcomed when judiciously applied to the removal of causes of temptation, there is required a more personal application of self-denying and enlightened principles before any great change can be hoped for. This new branch of work, undertaken by the National Temperance League, is gradually being spread throughout the service, and is meeting a response which augurs hopefully for its permanent value to the soldier and to the nation.

## THE USE OF ALCOHOLIC BEVERAGES.

BY CHARLES R. DRYSDALE, M.D.,

*Physician to the Metropolitan Free Hospital, and the North  
London Hospital for Consumption, London.*

It seems to be supposed by many persons among the non-professional public, that medical men have some difficulty in making up their mind as to whether the use of alcoholic stimulants is a good or a bad habit in ordinary health; but I am persuaded that medical science is far too difficult, and will remain so for many centuries, perhaps, to admit of any approach to unanimity on important practical questions such as this being attained to by the mass of the practitioners in this or any other country. Each of us who have spent many years of our life, therefore, in the treatment and observation of disease, must content ourselves with asserting our *own* interpretation of Nature's secrets, and not be dissuaded from so doing lest some other observer, with the very same field of observation, should come to opposite conclusions. Thus it is that, although I have long come to the conclusion that the safest mode of living, for the human race, would be entirely to abandon the use of alcoholic drinks altogether, it does not surprise me that some persons of great ability should have come to a different opinion. For many years past I have seen multitudes of patients whose symptoms I had been able to refer to the drinking of immoderate and even moderate quantities of spirits or beer; whereas I must say candidly that I know of no large class of patients who are ill, as some of my respected brethren seem to assert, by reason of taking little or no stimulants. In the Consumption Hospital, to which I am attached, there are never, in my experience, cases wanting of breaking down of the lung tissue, and death caused by the chronic tippling so alarmingly common among the males of the poorer classes in London. And at the Metropolitan Free Hospital, the occurrence of gout, dropsy, paralysis, bronchitis, and liver disease, from drinking, is a matter of constant and undeniable occurrence in my experience.

I know very well that Dr. Anstie and other energetic followers of the late Dr. Todd, of London, are wont to look upon alcohol as one of the best kinds of food for overworked literary men; and in a journal, *The Practitioner*, I recently saw that the editor (Dr. Anstie) talked of the utility of such persons habitually partaking of a daily bottle of Bordeaux wine; but I cannot, in any way, say that I understand the *rationale* of such advice. It seems to me that simple food and simple beverages give to the

human animal all that is required for the building up of the tissues, with as little disturbance as possible of the circulation. At first, when any one, not habituated to the use of beer, wine, or spirits, partakes of any of these, the patient feels giddy and uncomfortable: the pulse rises in frequency, the head becomes hot, and the cheeks flushed. Will any medical man assert that such effects are those we should wish to arouse habitually by our daily diet? I think not. It is custom which dulls the sensibility to these noxious effects of stimulants on our nervous system; but is it worth the while of any of us to become less sensitive to such poisons?

In some diseases, as fever, alcohol is occasionally, though rarely, a most valuable remedy, and is *far more useful* to persons who have not been accustomed to it than to habitual drinkers; so that it is worth while, on this account alone, to abstain altogether from its use in health. As to the assertion that alcohol is a food, just like meat or bread, this is notoriously untrue. If it be a food, as many will have it, no worse kind of food could, I think, be imagined than one which dulls the faculties, renders digestion more difficult, and tends to produce sleep. We have never, I think, treated any of the lower animals to any such food, although their diet has been sedulously attended to by farmers and others, impelled by the hope of the gain which would attend any improved article of diet in their case. That alcoholic beverages do not render men more able to bear cold or heat, but the very contrary, is known by the recital of Havelock, of Carpenter, and others. That it makes soldiers fight well is categorically denied by Dr. Jeannel, recently in the French army, where drunkenness has been very plentiful. In India, the most courageous men, it is said, were those who abstained altogether from alcohol. Statistics of Life Insurance Societies show, what my experience would lead me to expect, that even moderate drinkers have not nearly as good lives as abstainers; and among the richer classes, any physician of experience will not be long coming to the conclusion that, were it not for habits of drinking, the average of life would, in these days of comparative hygienic knowledge, be indeed greatly prolonged.

Tobacco smoking and alcoholic beverages are, indeed, the most anti-hygienic habits of this century, and nothing promises more for the future health of civilised nations than crusades against these two prevalent habits. There are so many innocent stimuli of the nerves nowadays, so many new sights to see, so much to read and study, and so much fine music to hear, that it is ridiculous to suppose that civilised men require any harmful stimuli, such as those of alcohol and tobacco, to keep them up to the level of energy required by the society in which they live. It should,

I think, be the pleasure of every medical man to show, by the simplicity of his own diet, in regard to both of these poisons, an example to the rest of the world; but I am sorry to say that numbers of medical practitioners are anything but willing to acknowledge this to be a truth, although I am not acquainted with any physician or surgeon of practical experience who would not endorse my opinion as to the very great frequency of evil effects resulting from drinking spirits, beer, and wine.

Whilst saying all this, I must guard myself from being supposed to, in any way, sanction resort to *legislative interference* in these and kindred matters. I strongly object to any laws similar to the Maine Liquor Law, because I think they are direct infringements of the right that each adult human being has to managing his (or her) own health in his (or her) own way. But I join, with heart and mind, in imploring the thoughtful people of this nation to refrain, if possible, entirely from the use of alcoholic beverages, except when prescribed in the hour of sickness. The intellect would be then less affected by a drug which often prevents the drinker from paying attention to any well-considered schemes for social amelioration or the advancement of the true happiness of the race.



## Miscellaneous Communications.



### BREAKFAST TO MEMBERS OF THE BRITISH MEDICAL ASSOCIATION.

ON Thursday morning, 10th August, Mr. Samuel Bowly, as president, and Major-General F. Eardley-Wilmot, F.R.S., as one of the vice-presidents of the National Temperance League, invited the members of the British Medical Association to breakfast with them at the Royal Hotel, Plymouth. The custom of giving this breakfast was established about two years ago, when the British Medical Association met at Leeds. At that gathering about 150 members of the Association attended, and on the second occasion, when the meeting was at Newcastle,

about eighty were present. This year about 110 members availed themselves of the invitation. The catering was excellent, and the arrangements were highly satisfactory. Amongst those present were Mr. R. Alford, Weston-super-Mare; Mr. F. B. Anderson, Hull; Dr. Julius Althaus, London; Mr. W. Adams, London; Mr. Benson Baker, London; Dr. A. Baker, Dawlish; Mr. J. W. Blake, Plymouth; Mr. W. C. Bezley, Hanwell; Mr. J. W. Baker, Derby; Mr. Thomas Bott, Bury; Mr. W. Bartlett, London; Mr. Christopher Bulteel, Stonehouse;

Dr. James Clark, Walsall; Mr. H. E. Crossby, Nice; Dr. Corry, Belfast; Mr. F. M. Corner, London; Mr. J. J. Corrie, Leeds; Mr. P. R. Cresswell, Dowlais; Dr. G. C. Dale, London; Mr. Andrew Davies, Swansea; Mr. T. J. Dyke, Merthyr Tydvil; Mr. H. D. Ellis, Poole; Dr. Fitch, Kidderminster; Mr. S. Felce, London; Dr. J. M. Fothergill, Leeds; Mr. John W. Greenwood, Ossett, Wakefield; Dr. Griffith, Port Madoc; Mr. H. S. Gaye, Newton Abbot; Dr. W. S. Gervis, Ashburton; Mr. Thomas Good, Launceston; Mr. Reginald Harrison, Liverpool; Dr. Hall, Launceston; Dr. Hawkins, Stonehouse; Dr. Harris, Redruth; Dr. Hingston, Plymouth; Mr. P. H. Holland, London; Mr. Jonathan Hutchinson, London; Dr. Radclyffe Hall, Torquay; Mr. J. G. Hall, Swansea; Dr. Harris, Camborne; Mr. James Hicks, Plymouth; Dr. Edmund Jones, Ross; Dr. V. Jagielski, London; Mr. John Jones, Fairbach, Llanelly; Dr. G. Jackson, Plymouth; Dr. A. Jessop, Castleford; Dr. John Lang, Southport; Mr. Thomas Leah, Stonehouse; Mr. Liddle, Liskeard; Mr. Leverton, Truro; Dr. Charles Lord, Hampstead; Dr. G. Langworthy, Modbury; Mr. Joseph May, Devonport; Mr. R. H. Meade, Bradford; Mr. Charles Oscar Murphy, Manchester; Mr. L. P. Metham, Devonport; Mr. C. A. Newham, Wolverhampton; Mr. Thomas Pearse, Plymouth; Mr. William Pearse, Plymouth; Mr. William Pearse, Bodmin; Mr. Probert, Merthyr Tydvil; Mr. W. Prowse, Amerdham; Mr. Alfred Prideaux, Liskeard; Dr. C. H. Parks, St. Colomb; Dr. Prance, Plymouth; Dr. Payne, Stroud; Mr. J. C. Ross, Budleigh Salterton; Mr. William Rogers, Hinds, Yealmpton; Dr. Row, Devonport; Dr. G. P. Rugg, London; Mr. T. M. Stone, London; Mr. William Square, Plymouth; Mr. W. J. Square, Plymouth; Dr. Shettle, Reading; Dr. W. H. Smith, Bridgwater; Dr. Sleman, Gunnislake; Dr. Taylor, Cardiff; Mr. F. A. Thomas, Devonport; Mr. Frederick Turton, Wolverhampton; Dr. W. Williams, London; Dr. Woodford, Taunton; Mr. T. W.

Williams, Birmingham; Mr. Thomas Wild, Manchester; Mr. William C. Worley, London; Mr. John Whipple, Plymouth; Dr. R. Willis, Horrabridge; Dr. W. Winterbotham, Bridgwater; and Mr. W. B. Young, Reading.

After breakfast had been served,

Mr. BOWLY said: I am very glad to see so large an attendance of the members of the British Medical Association. The National Temperance League, by whose invitation you are assembled, and of which I am the president, was established some years ago for the purpose of removing by moral suasion the evils attendant upon intemperance. We are not as a society concerned with the legislative section of the temperance movement; ours is the moral suasion department. I believe we are all agreed as to the enormous evils of intemperance. (Hear.) No persons know better than medical men what those evils are, and few persons sympathise more with the efforts made for their removal. The great difficulty is how to remove those evils, and we came to the conclusion long ago, that for the great mass of the people the only course is for them to avoid the public-house altogether. (Hear, hear.) They have no convenience for drinking at home; they have no cellars for wine and beer, as we can have in our own houses; and so they go to the public-houses, where they are exposed to very great temptations—temptations which, as we know, press the most hardly upon those who have the least power of resistance — (hear) — who have the least education, and the least amount of religious principle. (Hear.) For these reasons five and thirty years ago I felt it my duty to stand by the working men in their endeavours to get out of this fearful evil. For this movement began with the working men. (Hear.) It was a noble effort on the part of the working people of this country to endeavour at the cost of some self-sacrifice to raise the position of their own class; and I felt it both my duty and my privilege to follow them. There can be no question, I think, as to the

completeness of the remedy which we propose for the evils of intemperance. If people do not drink, they cannot get drunk. (Hear.) The question is, whether total abstinence can be practically carried out to such an extent as would secure the end we desire. The working men are all the better for giving the drink up; there is no natural taste for it at all. The children of our Bands of Hope are perfectly safe at present; it is when they become young men and young women that they do as other people do. (Hear.) I have been astonished myself at the power of custom over really strong minds. (Hear.) One of the greatest difficulties that we have to contend against, is the custom which has so long prevailed, not merely to use alcohol as an article of diet, but for the purposes of good-fellowship. Then we come to the medical part of the question. A great many people suppose it is essential for their health. (Hear, hear.) And here, gentlemen, I must appeal to you: if we do not stand upon right scientific principles, we must fail; but we have an idea that what is morally right cannot be scientifically wrong. (Applause.) I have never advocated the entire disuse of alcohol as medicine. (Hear.) I say that, to persons who are not in the habit of taking alcohol, it is a far more powerful medicine than to those who are in the habit of taking it every day. (Hear.) I have been thirty-five years a total abstainer myself, against the advice of my medical man, and with immense advantage to my health. I never felt stronger in my life than I do to-day. (Hear.) But there may be varieties of constitution, no doubt, and I do not pretend to say that I am a fair example of the effects of total abstinence upon everybody. (Hear.) I think, however, we shall all agree that wine as a medicine should be used very carefully. I am quite sure there are thousands of persons who have become intemperate through using drink as medicine—(hear)—therefore its application does require a great deal of care. We have been labouring, at an immense personal sacrifice, to get rid of this enormous evil. I think

we are entitled, at any rate, to a fair consideration of the question, upon moral as well as upon physical grounds. (Hear.) As to the nonsense that is sometimes talked about this question, I am quite prepared to repudiate it. (Hear.) I shall be very glad to hear opinions expressed upon this subject, from a scientific point of view, by gentlemen of your good sense and intelligence. To a great extent you, as medical men, can support us by your moral efforts. Public opinion is quite alive to the question. The experience of thirty-five years becomes a fact, and to fact theory must bow. I do hope the time is coming when we shall have a much more intelligent opinion upon this question than we have had. (Hear.) I remember the day when we had only seven abstaining clergymen in this country: now we have seven hundred, and I see no reason why the number should not increase to seven thousand. Prejudice, no doubt, has been strong against it, but I hope our meeting to-day with such a number of intelligent gentlemen scattered all over the country will help the advance of public opinion. (Applause.) Upon moral grounds, I never expected my servants and family to adopt a higher standard than I did myself. (Hear.) We should get badly off if we had an army with no officers, and when we have officers they must go before the army, and not behind. (Hear.) If a movement like this is to succeed, it must be by means of persons like yourselves—of education, influence, and religious principle—leading it. I hope you will give the question a fair and candid consideration upon moral and scientific grounds. (Applause.)

Mr. WHIPPLE, president of the British Medical Association, said: Gentlemen, having been honoured with the post of president of the British Medical Association at its Plymouth meeting, I readily accepted the invitation to come here and to give my professional opinion as to the abuse of spirit in all its forms—fermented liquors in every form and shape. Now, in a large seaport like this, of course we have abundant opportunities of seeing what the effects of the abuse of

spirit are; and in places where fever occasionally occurs—though it does not occur here very frequently, I am happy to say, to any great extent—we are enabled, also, to see the advantages of spirit when administered under proper medical direction. (Hear.) Therefore, in what I have to say I shall take neither one side nor the other, nor be at all prejudiced. (Hear.) I look upon the use of spirit as medicine upon some occasions as absolutely necessary. (Hear.) I also regard it in this way: that when the body and powers generally are much exhausted—for example, from overwork, the digestive powers more or less injured, and not able to perform their work with so much readiness for the restoration of nervous influence—it is absolutely necessary, and under these circumstances we are obliged to recommend the use of stimulants in moderation. We do this upon the same principle that if a plant is drooping you pour water upon it. Water for the plant is a sufficient stimulant. I do not think water is a sufficient stimulant for our nervous powers. I quite agree that the administration of small quantities of spirit in the case of persons who are in the habit of taking large quantities will be of little benefit; but for those who are not in the habit of doing so, one or two spoonfuls will work a wonderful change. (Hear.) I am not a total abstainer myself, nor am I an excessive drinker, and I have found advantage myself, now and then, when quite exhausted from mental and bodily fatigue, from two or three spoonfuls of brandy, or one glass of sherry with a little water. I must tell you, however, that tea has had nearly the same effect. I have travelled 740 miles, from Basle to London, without intermission. I have arrived in London at nine o'clock at night, gone into an hotel at Paddington, had a cup of tea and a little piece of cold chicken; and I can assure you that with one or two cups of tea I could have gone the 740 miles over again. (Applause.) Tea has a wonderful power of invigoration—(hear)—and I attribute

the advantage of tea, so far as I am concerned, to the fact that I am a moderate drinker. I would not have accepted the invitation to come here to-day to repudiate spirit altogether. (Hear.) In our profession it would be utterly impossible to get on without it. (Applause.) Frequently cases come under our care—some particular cases of fever, for example, where the patient is in a very exhausted condition—where the difficulty is to get them to take as much as we require. I am quite sure that if we did not use spirits we should lose a number of valuable lives which are now saved by its use—I mean by its use under medical advice. I am very sorry our chairman refused to take it, against the advice of his medical man; but I admire his honesty. (Hear, hear.) It says very little for the medical man, and a great deal for the gentleman. (Applause.) Either the medical man had not sufficient power over his patient, or he did not consider the subject. That Mr. Bowly has abstained without detriment is very clear. (Applause.) We have not the advantage of knowing who the medical man was; but there must have been an error on one side or the other, and judging by our chairman's appearance, I should say it was on the side of the medical man. (Laughter.) I will go a little further about this drink. There are a great many men who are what are called free livers, and many of them are to be found among the commercial travellers of this country, though the evil is by no means confined to them. These people take a little more than they ought, some of them a great deal more. (Hear, hear.) They say they cannot do business without it. I say that they can. (Hear.) I know that I can take a long drive into the country, and do my work without it, and I say that they can. (Hear.) The first step they take is a glass of beer at eleven o'clock; that only increases thirst and calls for another at twelve, and then they follow that up with another glass. (Hear.) There are men, too, who find that they cannot do business with their customers. They find they do not

get on very well, and that their customers do not care about purchasing, so they say, "Oh, dear me; it's very hot, let's have a little champagne." I have known men myself to meet at twelve o'clock in the day, and continue drinking champagne without one morsel to eat, until four in the afternoon. Giving and taking bribes in this way is one of the great errors of the travelling life. (Hear.) Another great error and evil which one notices more and more every day, and which God knows is most painful, is the manner in which young people take to drink. Only last night, I saw these houses that are open until eleven or twelve o'clock, surrounded with boys, with pipes in their mouths and beer in their hands. (Hear.) We all know what that leads to; and we know, too, that if we can only get them from these houses, we shall go far to save them. (Hear.) I would urge that those who have influence over them should exercise it. If tradesmen exercised such an influence over those in their employ, we should soon see the beneficial results. (Applause.) In the better classes of society, I am happy to say that drinking has pretty nearly gone out. (Hear.) If a man takes a little too much now at dinner, you do not ask him again to your house. But when I was a young man it was a common thing to see a person waddling intoxicated out of the dining-room into the drawing-room. I never see any such thing as that now. (Applause.) Therefore, so far as the better classes of society are concerned, the vice is going out. If they can only set the example, and press it energetically upon those beneath them, I think that might be carried—if not to the extent our excellent chairman desires—yet to a very great extent, and we should see a happy comfortable mass of people. (Applause.) I can bear testimony to a large number of homes that I have seen that have been made miserable through drink. A case in point occurs to me—that of a shoemaker, a very expert and dexterous workman, who used to work four days a week and drink three. I saw him the other day, much to my

surprise, going to church with a decent coat on; and I said to him, "Why, where are you going with that coat on?" He said, "Oh, I have seen the error of my ways." I said I was very glad to hear it. He said, "The Lord appeared to me in Frankfort Street the other night, and said, 'Mr. So-and-so, if you don't give up drink eternal punishment will be your end.'" (Laughter and applause.) I find it is of no use to tell a man who drinks, if you go on in this way you will die in six months. They say, "Do you think so?" and then go on the same. I met the other day a gentleman, twenty-six years of age, who had just recovered from delirium tremens. His medical man said to him, "I thought you would have died, but you have had a most wonderful preservation. If you take drink again you will not live six months." Well, he took to drink again, and died. So you see it needs something more than medical men can do by telling patients they will die if they do not give up drinking. Religious influence, I believe, does more good, generally speaking, than medical persuasion, in convincing drunkards of the errors of their ways. (Applause.)

Dr. EDMUND JONES, of Ross, Herefordshire: I have listened with very much pleasure to the remarks of the two speakers. Our county makes rich and powerful cider, which sells at from 5d. to 6d. a gallon. Our poor labourers live very hard, chiefly having bread and cheese for dinners, and—I don't know how the difficulty could be surmounted—are unable to digest it without taking a certain proportion of some fluid containing alcohol. (Hear.) I agree entirely with the remarks that have been made, and have endeavoured, so far as lays in my power—I have been many years in the commission of the peace—to check the evils of excessive drinking. I have observed that large sums of money have been paid in fines and penalties inflicted for riotous and drunk and disorderly conduct. (Applause.) I was exceedingly glad to hear the remarks of our chairman. They were so much more moderate than I have

often heard before. (Applause.) Such speeches are calculated to do more good—to induce more people to be abstainers. (Applause.) The speeches on total abstinence which we hear generally are certainly not calculated to induce people to become total abstainers by their moderation; people are not likely to be converted by denunciation. (Hear.) I entirely agree with what our worthy president has said as to the use of alcoholic liquors as medicine; and speaking of my fever patients, I am perfectly certain that many of them would have died who are now alive if I had not administered spirit to them. (Hear.) As a member of this Association, I can only express my thanks to our president for what he has said.

Mr. F. B. ANDERSON, of Hull: I wish to observe, in recommendation of temperance, that I have been fifty-two years without ever having been a day in bed, or in any way incapacitated from attending to my practice. (Applause.) I am not a teetotaler, but I am a temperance man. I never drank a drop of liquor until I was twenty-five; and I never drank a glass of grog in my life three times in the twenty-four hours. I shall be seventy-five next birthday, and I am as well as ever I was in my life. I consider it entirely due to my not having been a drinker. (Applause.) Rarely have I ever taken anything, and I never was in the habit of taking a glass of grog at night. I consider there is no necessity at all to drink spirit individually; and I am always best when I get the least. (Applause.)

The CHAIRMAN: I am sure we all agree that strict moderation is far better than any approach to intemperance. (Hear.) I never gave up the use of alcoholic liquors because I considered them physically injurious. That is not the point I wish to discuss now. We know, too, that all kinds of work can be done without them. What I should like particularly to hear the opinion of gentlemen upon is this—whether there is not increasing evidence that there has been some little mistake, and whether the supply of nourishment instead of

stimulants to the sick would not be of more service? (Hear, hear.) I believe there are some gentlemen here who would go as far as we do.

Mr. R. H. MEADE, Bradford, Yorkshire: I quite agree with a number of the remarks made by our worthy president; and that it is in the power of medical men to do a very great deal for the removal of intemperance. The remarks that I have to make do not so much apply to the lower classes of people. Most of the observations made this morning have been aimed at the evils of intemperance and drunkenness among the lower classes. (Hear.) No doubt these are very great, and while I perfectly agree with our worthy president that drinking has gone out in a great measure among the gentlemen of the higher classes, I am very sorry to say from my own experience that it is increasing among the ladies. (Hear, hear.) There are at the present day, many quite of the higher classes of people who drink to excess. (Hear.) The young ladies—not merely the older ones—drink a great deal. (Hear, hear.) They drink sherry and beer at their various meals, and fashionable ladies will drink beer for their breakfast; and they think nothing of a glass of sherry or champagne at lunch, and two or three glasses more after dinner, about seven or eight o'clock in the evening. It is a great and a growing evil; and there is a greater amount of drinking going on among the ladies than even medical men are aware of. (Applause.) I am becoming convinced that there are a very great many who take too much. We all know that ladies are very apt to conceal what they do even from their medical attendants. Young ladies who begin drinking in this way will, no doubt, drink still more as they get older. I don't mean to say it is a purely fashionable evil, though no doubt fashion has a great deal to do with it. (Hear.) It is fashionable among ladies of the higher classes not only to drink more than they should, but to talk slang—that is part of the fashion of the day. (Hear.) I think we are largely indebted to our transatlantic friends, and

their multiplicity of so-called drinks, for all this. There is a vast deal of intemperance in society, no doubt—very little port is used, but a great deal of sherry and champagne, all after dinner, and more or less drinking all day long. I am almost a teetotaler, not upon principle, but merely because drink does not suit me. (Hear.) Still I am perfectly agreed that we cannot abstain from the use of stimulants in medicine, though I think medical men prescribe a great deal more than is necessary. (Applause.) I have been a hospital surgeon for twenty-five years, and I know that one surgeon will prescribe twice as much in the way of stimulants as another, and yet that his cases will do no better. (Applause.) You cannot treat cases of pyæmia or diphtheria without stimulants. No doubt hundreds of lives are saved by the use of stimulants, but no doubt, on the other hand, they are greatly abused. (Applause.) Too many stimulants are recommended to ladies; they are encouraged to take a great deal in nervous and uterine cases; and I am sure that some members of our profession carry this stimulant treatment a great deal too far. (Applause.)

Mr. JONATHAN HUTCHINSON, Senior Surgeon to the London Hospital: The subject of temperance has occupied a great deal of my attention for many years; and I have always regarded as the greatest privilege of my education that I was brought up as a strict total abstainer. Until I had reached the age of twenty-two I never tasted any alcoholic stimulants, and I do not believe I was the worse for it. (Applause.) Since then I have taken a little stimulant, and I believe with certain advantages. (Hear.) I hold that we are very much indebted to those who call the attention of the medical men, and bodies like this, to this question. (Applause.) I am sure there is a great amount of evil going on in respect to which we have a very large measure of responsibility. (Hear.) In saying this I must say also that I think many of our friends think rather hardly of the medical profession. I believe that teetotalers generally have

no idea that we devote so large a portion of our time to the determined advocacy of temperance. (Hear.) I believe that a very great work is done in this way. I was glad to hear the reference made to the hospital experience of medical men on this question; and I would suggest that the British Medical Association might undertake some work in reference to the collection of statistics upon this point. (Hear.) In the hospital with which I am connected, stimulants have been used in past years very freely indeed. At my suggestion two years ago, tables were ordered to be prepared by the resident medical officer, as to the quantity of stimulants prescribed to each patient, and the results of the cases. Without going fully into detail, I may just say this—that there has been no advantage hitherto upon the side of those who use stimulants largely, and that during the past year the advantage has been very decided the other way. (Hear.) I should have very much liked to have made some remarks as to the treatment of acute diseases. My own impression—as a surgeon I have no right to speak respecting fever—is, that I find my medical friends most strongly of opinion that it is impossible to treat bad cases of fever without pouring in alcohol. I believe the physicians are very much worse; but as to myself, I find I am always on the temperance side. (Hear.) I have great faith in the milk regimen. (Applause.) My experience deals more with cases of erysipelas and pyæmia. It is extremely difficult to say, but here again my own impression is that a bad form of erysipelas is quite as well—indeed, rather better—treated in that way than by a free exhibition of stimulants. (Hear.) We are very much indebted to the National Temperance League for forcing such matters upon our attention.

Dr. RADCLYFFE HALL, Torquay: I am convinced that a good deal of milk and a little stimulant answers extremely well—better, indeed, than either milk alone or a free use of stimulants. When Dr. Gairdner, of Glasgow, strongly advocated the treat-

ment, especially in fever cases, by a purely milk regimen, I, with my brother, tried it upon a very bad case of fever. (Hear.) We tried it, according to his directions, with plenty of new milk; but the case did not do well. We tried it for a while; but in the course of five or six days we were obliged to give a small quantity of brandy. The result was that the case began to improve immediately, and did remarkably well. (Applause.) I believe that in many instances instead of pouring in large quantities of spirit, we may give large quantities of milk, with small quantities of brandy. In fact, I find myself very much in the habit of saying, "take a large champagne glass of milk every two hours, with a teaspoonful of brandy," which would not be quite a wineglassful of brandy in the twenty-four hours. My experience is in favour of giving a small quantity of stimulants with a large proportion of nutritious food. (Applause.) I do not think that sufficient allowance is made for medical men, in the difficulty there frequently is in putting theory into practice. Patients come to you who have been taking too much—ladies frequently take far too much. If you say to them "Stop all this," they go to another doctor, who cannot get on any better with them. You cannot make them "stop all this." You must do like you do with a man who has got into a bad train of thought, and who constantly dwells upon it: you must encourage him to think of something else. He has got settled down into a groove, and it is of no practical use for you to say, "Come out of this." The best thing you can do is to suggest a new groove, and shunt him down the new line. (Hear.) You have a man come to you who has been in the habit of drinking strong bitter beer, which is a most pernicious thing when taken on an empty stomach. Still the slang of the day is, "I believe in bitter beer." It is a most pernicious thing on an empty stomach; and it should never be habitually taken by a man after his waist begins to enlarge, which will be about the age of forty. The thing to get

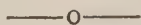
him to take then is light claret, which soothes his nervous system and makes him feel happy and comfortable. (Hear.) So to a lady or gentleman who have been in the habit of taking their glass of sherry, for example, I say, "You had better instead take a glass of light claret, you will find it will support your nerves far better." You suggest the new groove, and shunt your patient down it. Practically, it comes to this: that light claret contains the smallest quantity of anything pernicious of any drink I know. As to dinner drink, I tell them they may take two or three glasses of claret, but that they had better limit themselves to two or three glasses. You can get them to do this when you cannot get them to stop altogether. (Applause.)

Mr. WILLIAM SQUARE, Plymouth: I quite agree with what has been stated by Mr. Bowly, and I do not agree with the theory put forward by the last speaker. (Hear.) If a man has been in the habit of taking too much, he must be stopped. (Applause.) It is of no use talking to him about light wine, for if he takes it he goes on in the same way. (Applause.) We are members of a noble profession, and let us practise something like self-denial; let us, if leaving off drink does not hurt us, show that it does not, for the sake of example, in order that we may benefit those around us. (Applause.) If we can only in this way save one man it is a great thing; but if we can save ten it is a greater. (Applause.) Thank God, I know that many through my example have been saved. (Applause.) I recollect once, a fine, noble man came to me whom I esteemed very much, but who used to drink freely. I took him aside as a friend, and talked to him kindly, and from that day he stopped the vile habit, and from that day to this has taken nothing. (Hear.) He is a respectable member of society, and his wife loves him better than ever. Practise a little self-denial yourselves, and you will do good to your patients, and have the approval of your own hearts and consciences. It is a horrible thing to fancy persons cannot keep

themselves from drink. I thank God I never had a temptation in my life to drink. (Hear.) Let us, then, exercise a little self-denial: we have a great influence; let us exercise it. In America, 90 to 95 per cent. of the ministers are teetotalers, and they exercise a very great influence. The ministers in this country are following their example more and more yearly, but they are not up to that mark. When a minister takes his glass, what effect does what he preaches in his pulpit have? (Hear.) Who will follow him? And so if a medical man in this matter does not set his patients an example, how can he expect them to follow his advice? (Hear.) The temptation to drink is really fearful. I recollect speaking to a lady who took too much with her husband, and she said, "You are very kind, but I can assure you the temp-

tation is sometimes so strong that if there was a bottle of gin on the other side of the mouth of hell I should go for it." (Hear.) I say it is the duty of medical men to come forward and do all that they can to stop this terrible evil among our sons and our daughters. (Applause.) We, as medical men, are moral men, and often religious men. We look to God for everything, and we should surely show our sense of our dependence upon God by trying to do the best we can for our fellows. (Applause.) My father was a grand man, a noble man, a finer man than any one here, but he died at the age of forty-two, a victim to intemperance. I know well what the evils of intemperance are, and I call upon all my fellow medical men to do their utmost to stay its ravages. (Applause.)

The proceedings then concluded.



## THE TREATMENT OF HABITUAL DRUNKARDS.

THE annual meeting of the Monmouthshire and South Wales branch of the British Medical Association was held at the Swansea Hospital, on Wednesday, July 5th, when Dr. Padley, of Swansea, president for the year, read the following important paper:—

"It has fallen to my lot, especially within the last few years, as it has no doubt to most or all of my hearers, to have to deal with a good many cases of a most painful character—occurring usually in comparatively young men (and sometimes in women)—men of intelligence, excellent in all the relations of life, prosperous in business, surrounded by all the circumstances of domestic happiness, of sound constitutions, in good health, and with every reasonable prospect of long life before them, but who are now in their graves. They have been hurried there by an insane propensity, natural or acquired, resulting in an uncontrollable vice, which from usually small beginnings, and recurring in

paroxysms, increasing in frequency and duration, at length gains such a mastery over its victims as to be almost irresistible. Then follow, as the almost invariable sequence—health hopelessly shattered, character damaged, social prospects ruined, reason unhinged, and life destroyed. The cases I refer to belong to the class of inveterate, periodical, or habitual drunkards, which, whether we call them drunken maniacs, dipsomaniacs, oinomaniacs, or any other name (to distinguish them from the ordinary drunkard), maniacs in one sense they are; the propensity I hold to constitute a sufficiently well marked species of insanity, which should be treated as such, and should therefore form the subject of special legislation to hold it in restraint. It may appear a waste of time in an assemblage like this dealing with a subject so familiar to all of you. My object in bringing it before you is not so much with the idea of throwing any new light upon it, as of eliciting discussion and

bringing to bear upon it the influence of the profession, both collectively, as an association like this enables us to do, and individually in our communications, especially with those who have a voice in the councils of the country; and thus to strengthen the hands of those who are at length endeavouring to mitigate this frightful social evil in the only way (with one class at least) likely to be effectual. The subject has been twice brought before Parliament, and a bill introduced (but for the present withdrawn) by Dr. Dalrymple, who is making strenuous and praiseworthy efforts in this direction, and who deserves the active support of our profession. There are two kinds of insanity in relation to this subject—one which *follows*, and is consequent upon, excessive indulgence; which we see in the several forms of the ordinary delirium of drunkenness, of acute mania, the immediate effect of the alcoholic poison, or of delirium tremens—its more remote effect; also in the various degrees of mania, melancholia, and dementia, the consequences of more or less permanent structural changes in the brain. The other is a form of what we cannot but look upon as Insanity, which *precedes* the intemperate outbreak—often hereditary and running in families;—one which, independently of a craving which is the consequence of previous excess, urges its victim to the destructive habit, uncontrollably and against his better reason and oft-repeated resolutions. I do not mean uncontrollably in an absolute sense, but the power of control in these cases requires an exercise and a strength of will which very few indeed possess. It is important, in dealing with this question with a view to legislation, to distinguish between the various types and phases of the malady—between the ordinary drunkard, tippler, toper, or sot, and the dipsomaniac—between one who from various causes has got into the bad habit, who has acquired it from idleness, bad company, from the relief found at first and for a time from the nervous depression, the result of bad air, bad food, dirt and wretched-

ness, or from other causes, -between such a one and the drunken maniac. The former, numerically the most important class, requires, at least in the first instance, a different consideration and treatment from the cases I now wish to refer to. For them an improvement in sanitary conditions—in those which relate to the mental and bodily health of the working classes—would constitute the most important remedy—striking at the root of the evil, and grappling with one of its chief sources. These would be found, to quote my own words upon another occasion, ‘frequently, perhaps most frequently, in the physical conditions by which our poorer populations are surrounded, and in the absence of those means of recreation which the mind requires, and not being found in the hovels they call home, nor provided in a healthy form elsewhere, are sought and found, such as they are, in the public-house. The amelioration of the one and the supply of the other should be the starting-point in the treatment of this hideous social malady. Without these the preachers of temperance and teetotalism preach in vain. The means of ventilation and cleanliness first, then oratory and exhortation. To reverse this order is beginning at the wrong end. Talking will not keep the bottle from the drunkard’s mouth as long as he finds in it relief from the languor and depression of body and mind, the natural effects of the foul exhalations which are suffered to pollute the air he breathes, aided by the dirt which is suffered to pollute his skin. If water is to replace alcohol it must be freely used *outside* the body as well as in.’ These are not the cases which we should at present try to reach by the legal restraint which would be furnished by asylums. All admit the desirableness of legislation for the dipsomaniac; but every attempt is met by the fear—no doubt generally speaking a proper one—of interfering with the liberty of the subject, and by the assumed impossibility of discriminating the cases suitable for legal restraint, or of defining what constitutes, in the terms of a bill

lately brought into Parliament, an Habitual Drunkard. It is the want of a clear and distinctive acquaintance with the subject on the part of most honourable members that causes them to mingle together all kinds into one class—that prevents them distinguishing between the various phases which so constantly present themselves to us—this ignorance, in fact, of the scientific bearings of the question, that forms a barrier to a just and useful, and, to all parties concerned, a merciful legislation. To them a drunkard is a drunkard; and then, perhaps, there arises in their minds the image of the toper, who, perhaps, seldom goes to bed sober; the bon-vivant, who often dines out, and as often returns home more or less in a condition described by many phrases of great variety; the intermittent tippler, who has his bout, but who has sufficient control over himself to limit its period—who is not possessed by what I should call the demon of drink—and who returns to his business with loss of appetite, much headache, some remorse, and a bottle or two of soda water. These are to a greater or less extent able to attend to their business avocations and the ordinary duties of life as citizens with regularity and even distinction. There may arise in the thoughts of hon. members a picture of such devotees of the glass or bottle being boxed up under an Act of Parliament. Why, many hon. members themselves—or even those of the Upper House, if the phrase ‘drunk as a lord’ does them not injustice—would not be safe. Then there is the sot, who is almost always more or less fuddled: the dram drinker, who gradually hobnails his liver, granulates his kidneys, damages his heart and brain, and dies distended with dropsy; and other varieties, both in kind and degree, which are so constantly met with and which constitute the great mass of drunkenness so rife in the land. These are not the kind of cases which could well be reached by enactments involving personal restraint, unless leading to a breach of the law in other ways. No medical man with

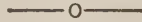
ordinary experience would find much difficulty in distinguishing them from the other class of cases to which I have referred, and which should form the subject of legislation, with a view to treatment, in the first instance: cases which appear to be the result of a mental malady—innate or acquired, existing to a great extent independently of extraneous causes—liable to recurrence almost beyond resistance or control when once partially yielded to, occurring in those surrounded by every comfort, as if an evil spirit within sought association with the bad spirits without, utterly reckless of, even while deploring, the consequences to themselves or to those most dear to them, urged on irresistibly, in spite of solemn promises and resolutions previously and sincerely made, which, though recalled and remembered, are, to the grief of the sufferer, insufficient to restrain him, and this even before excess has deadened his moral feeling, or excited the craving to gratify which he would at last barter his soul for drink. This is no overdrawn picture. Many here must have realised it. We, as medical men, together with wife, children, relations, and friends, are obliged to look on during the earlier stages of the insane paroxysm—knowing what it will inevitably lead to—but legally unable to do more than endeavour to stay its progress by moral influence and persuasion, which we know by sad experience to be, almost without exception, wholly unavailing. It is only when at length madness, in one form or other, results, that the law allows us to interpose by coercion. We see the poison lifted up to the mouth, but, legally speaking, dare not stay the hand which raises it. We are not permitted to prevent the mischief, but only to deal with it after it has been done. If a man be discovered in the act of swallowing a poisonous dose of prussic acid or of arsenic, the bystander is permitted, and even required, to dash the poison from his lips, and to hand the culprit—for he thus becomes one—over to the authorities to be dealt with according to the law, which at once imposes a

restraint, and enforces security in one form or other for a given period against a repetition of the offence. Not to do so would, I believe, be held as criminal participation. The law therefore stringently deals, and requires others to deal, with the suicide, and what are those concerning whom I am now speaking but suicides, if by suicide we mean one who knowingly destroys his own life? They are as much so as the man who takes the fatal dose of prussic acid or of arsenic, only one is slower—but if persisted in not less sure—than the other. The only distinction I draw between them is that one is taken *for the purpose* of self-destruction, the other is taken not with that object, but with a full and often a confessed and guilty knowledge that the destruction of life, by his own hand, will sooner or later be the sure result. I have plainly stated this to those I have been called upon to treat, and in many or in most instances of this class the justice of the comparison has been acknowledged. Suicide outright would in some cases be better than the slower suicide of the drunkard—one over whom the law now gives no power of control. The consequences in the former case would often be less disastrous; he would have less time in which to bring ruin upon his family; the period of wretchedness and misery to himself and all connected with him would be less prolonged, the final catastrophe being the same in both instances. I have already said, advisedly, that I have had to *deal with* these cases, as the law does not permit me to treat them, as it does other species of insanity, in the only effectual way. I do not mean that I have always looked on passively, but what I have done I have had no legal right to do, and would have rendered me no doubt liable to proceedings for false imprisonment, &c., if the patient had afterwards so determined. I might, however, have saved myself the trouble and allowed things to take their course; it was only postponing, not preventing, the evil, holding in momentary check, not curing the malady. This is only to be done by properly legalised insti-

tutions, the establishment of which would be no new experiment. They have been tried for some years across the Atlantic. Their success has been undoubted, their statistics, especially those of the Boston and New York State Institutions, showing a result of towards 50 per cent. of men of education, superior attainments and high character restored to their families, and as useful citizens to the State, who would otherwise have been irretrievably lost. It is, I say, with such facts before us, a most culpable apathy on the part of our rulers to allow the monstrous evil to continue to devastate the country without its remedy. Liberty of the subject indeed!—is it liberty to ruin and destroy property, domestic peace and life; liberty to a man to change himself from an ornament to society to the condition of the brute, and worse—to a criminal, a confirmed lunatic, and a suicide; destructive to himself and dangerous to others. We, as medical men, may in two ways strengthen the hands of those who are making laudable and persevering efforts in this direction. One by discussion or ventilation, as it is called, of the subject in associations such as this; the other is by pointing out, when we have the opportunity, to those in authority, or who have voices in the matter, the distinctions I have referred to. Many of us have this opportunity in our intercourse with members of the Legislature. Let us try and prepare the way in the matter of this great social reform, as Disraeli is said to have done in the case of his political reform, by educating the House of Commons. Nothing could more clearly show that there is room for such education than the statement made by the Home Secretary a short time since—that the measures to be introduced by the Government in relation to beershops and education would mitigate the evil. It shows how the whole subject has been mixed up in his mind. If he looked at the statistics of the class of patients admitted into the American institutions he would soon see how little beershops and education had

to do with the monster evil. It exists, in the form I am now speaking of, to a greater extent than most persons are aware, and it is, I again say, a piece of culpable apathy to allow it to go on without an attempt to apply

the only remedy which experience has shown to be available, and which is proved to have been largely successful among our transatlantic brethren."



### CASE OF CHOLERA IN LONDON.

By JAMES EDMUNDS, M.D., L.R.C.P., &c., *late Senior Physician to the British Lying-in Hospital.*

(From the *Medical Press and Circular*, of Sept. 13.)

THE following report will be of interest at this juncture:—

The patient (William C.), was a respectable married man, twenty-eight years of age, residing at 65, Charlotte Street, Portland Place, and by occupation a storekeeper at a builder's yard, near Regent Street. His occupation kept him so much at the yard, that he took some of his meals there, and was in the habit of using water from a pump to make his tea with. The attack of cholera supervened on the night of Monday, August 14. On that morning he had his breakfast at the yard as usual, and afterwards returned to his home in order to go with an excursion of the Fitzroy Band of Hope to some grounds connected with The Green Man, at Whembley Hill, near Harrow. They went by rail from Euston Square, and arrived at Whembley Hill, soon after eleven o'clock a.m. The patient spent the morning with the children, and joined actively in their amusements, including several games of cricket. He made his dinner from food brought from his own home, but he bought a bottle of lemonade at The Green Man, and afterwards got the bottle filled with water twice from the bar. He states that this water was very foul, and so nasty that some of the excursionists spat it out, and others refused to drink it, or disguised it with sherbet powder. He then tried a bottle of ginger beer, which he also thought nasty. During the afternoon

he was several times dreadfully griped, and had copious watery dejections. Still he played at cricket and skittles very actively all the afternoon, and drank more water. At five o'clock he had tea, supplied by The Green Man, and probably made from the same water. After tea he was several times griped, but not again purged, and he returned home by train at 8.15 p.m. In the train he felt generally unwell and very sick, but he reached home at 9.30 p.m. without vomiting or dejection. Immediately after reaching home he was dreadfully purged and vomited, the evacuations being discharged "like water from a tap," this occurred continually, and about 11 p.m. while making his way to the closet he was obliged to stop in the passage and vomit on to the floor. He emitted "fully a quart of fluid quite watery and tasting slightly bitter," after this he got into bed, he then vomited twice into a basin, and about 11.30 he was seized in the left leg with cramp so painful as to make him jump out of bed. While sitting on the side of the bed he vomited again, and reaching towards the basin he fainted and fell over it. His wife got out to help him, and when he recovered he drank a large quantity of cold water and returned into bed. From that time he was excruciated with cramp across the stomach and in the legs. He was also purged from twelve to twenty times more, but being unable to rise the dejections

passed under him. The people in the house ran to all the neighbouring medical practitioners, but unfortunately could get no one to come; about two o'clock the father arrived and he called me up. I knew nothing of the patient, and had never attended any of his friends professionally, but hearing that it was a case of cholera I dressed and went at once. As nearly as practicable I have, up to this point, recited the words of the patient and his friends. They are very intelligent and reliable people.

It was about half-past two o'clock on Tuesday morning when I saw the patient. The shrunken livid face and the characteristic hoarseness of the voice were so marked that, having seen a great deal of cholera, I had no need to ask myself the nature of the disease before me, and I addressed myself to investigate the probable origin of the disease, so as to look after the safety of others. The water in the house proved excellent, the cistern was lined with concrete, and, having no waste pipe, was exceptionally safe from contamination with sewer gas. The basement also appeared free from bad smells or sanitary defects, and the only points on which I could fix were the pump water at the builder's yard, and the foul water at Whembley Hill. I then examined the patient more minutely. A utensil half full of rice-water vomit stood on a chair by his side, and on lifting up the clothes from the foot of the bed I saw the body resting in a pool of dejection of a similar character. I dipped out a saucerful of this fluid from between the patient's thighs, and it proved to be characteristic rice-water discharge. There were also the low hoarse voice, the sunken areolæ round the eyes, the pinched livid countenance, the cold whitish ears, and agonising muscular cramps. The case was certainly one of true cholera, and one in which probably a few more discharges would cause hopeless collapse, but I learned that he had joined a Band of Hope at ten years of age, and since then had taken no intoxicating liquors, while his parents were also old abstainers. Of course these

antecedents were immensely in his favour, and being a man of small lithe active frame, I thought he would rapidly rally, if the effusion of blood-fluid were stopped. I therefore prescribed the following medicine which I have long relied upon in such cases :—

Spirit of chloroform one ounce; diluted sulphuric acid half an ounce; mix and give thirty to sixty drops in water every ten or fifteen minutes until the discharges are checked.

The patient was also to suck ice, and drink pure cold water *ad libitum*; and though the feather bed was saturated with choleraic dejection, I directed him to be well covered up and to remain where he was, the limbs to be carefully chafed, without exposing him to the cold, and a free current of fresh air to pass through the room. He was to take no other drugs and no alcoholic liquor. At four o'clock I saw him again; he had vomited after the first dose of the medicine, but not since; and the dejections were less frequent, and the cramps less distressing. They had carried out the treatment well. The father was to call me up and report progress at six o'clock. I then learnt that the cramps were distressing, but otherwise that he was better. To give the drops more largely and drink the iced water very freely, to continue the other treatment and to take no food. At 10.30 I saw the patient again in company with Dr. Buchanan, who, having seen the case announced in that morning's *Times*, dropped in at my house after breakfast to ask how the patient was going on, and I induced him to visit the case and investigate the circumstances. The patient was immensely better, and had taken about eleven drachms of the medicine. There had been neither purging nor vomiting for some three hours, and he had kept down a great quantity of water. He had passed no urine.

Dr. Buchanan, in reference to the question of infection, urged that, as soon as the patient could be moved, the bedding should be destroyed, instead of any attempt being made to disinfect it. This point had not yet

arisen, but I at once concurred in the suggestion, and the friends undertook to have the bedding destroyed when the time arrived. Dr. Buchanan also advised that the strong white carbolic acid should be used instead of the common article for disinfecting the discharges. This seemed almost an unnecessary precaution, but it also was adopted. I ordered the patient to take no more medicine unless the discharges recurred, to lie scrupulously still in bed, and go on as before. But if his stomach continued quiet to drink cold barley-water gradually strengthened with a little good milk. Dr. Thomas Stevenson, Health Officer of St. Pancras, having seen the announcement in the *Times*, also called upon me about one o'clock, and I invited him to see the patient, and accompanied him to the house. The patient was still better and his voice was now almost natural. To continue the same treatment. I saw him several times during the after part of the day, he went on well, but had a great deal of rumbling in the bowels and was very prostrate. At night he had that hebetude of countenance and ferrety sclerotic which ushers in the reactionary fever of cholera. He had passed no urine. To continue the barley-water and milk, and to go on precisely as before. He slept well that night.

On Wednesday at 8 a.m. he passed "quite a quart" of urine, with some scalding. It was "very dark and thick," it had been carbolised and thrown away, so that I did not see it. On Wednesday night he passed "a pint and a half more—dark, but clear." He slept badly that night, and had much rumbling in the bowels.

On Thursday morning he passed about a pint of urine. The heaviness of features and the redness of the eyeballs had pretty well cleared off, and he was shifted into another bed in the next room. The Marylebone Sanitary Inspector immediately afterwards saw the bedding, and took it away to destroy it. The bowels acted of themselves on the fifth day, the motion being described as small tape-like matter. Afterwards the motions be-

came normal. He was kept in bed some days longer, and then gradually got about his room. He was confined rigidly to milk and farinaceous diet till the eighth day, when broth and vegetables were added, and he was left to return to his ordinary diet gradually, and report progress to me.

On Friday, August 25, he reported himself at my house. It was then the twelfth day of his illness. He was weak, and very pale, but going off to Torquay next morning. He has since written to say that he is convalescent.

This patient took no alcoholic liquor during the attack, or in his convalescence. It will also be observed that he took no drugs, except during the first four hours of my attendance, when the sulphuric acid and chloroform were energetically administered.

The practical treatment of cholera is a subject to which my attention has been actively called. I saw much of the epidemic in Whitechapel in 1849. In the autumn of 1853 I was sent by the General Board of Health to Newcastle, and there I had charge of the notorious and filthy district called Sandgate, the focus of an epidemic that killed over 1,000 persons in eleven days. Afterwards I was sent to Dundee on similar duty, and some years later I had charge of cholera wards in Whitechapel. Having also seen a full proportion of cases in private practice, the subject is one in which I have had unusual experience. The following seem to me to be the practical points:—

1. To maintain the warmth of the body by proper clothing, avoidance of exposure, and heated applications if necessary.

2. To economise the muscular power by keeping the patients in bed, and not allowing them to rise for the discharges.

3. To promote the circulation by rubbing the limbs. This must be done carefully, as the patients have little feeling on the chilled surface of the body. I have often seen the skin actually rubbed off their limbs by friends, in their anxiety to relieve the excruciating cramps.

4. To restrain "the rapid current of

fluid from the blood into the intestinal canal." It may be argued that this current is "a salutary effort of nature" to expel a morbid poison; but certain it is that the patient is too often killed by the effort, and that the drain of fluid produces an abnormal condition of blood, and is followed by stoppage of the circulation at the pulmonary arterioles. Whether this stoppage occurs from the blood being too thick to pass, or from the arterioles being tetanised by a hypothetical morbid poison, is much the same as the difference between tweedle-dum and tweedle-dee. Probably the abnormal state of the blood, and a tetanised state of the arterioles are both factors in the stoppage. In my hands the dilute sulphuric acid given in full and frequent doses has proved the best means of checking the osmotic transudation of liquid, while drinking iced water has been the best means of restoring the fluidity of blood.

5. To relieve the cramps, and thus prevent exhaustion, chloroform—the most active and diffusible of the antispasmodics—is the safest and most efficient remedy, and I now never administer any alcoholic liquor, or opium, or any other drugs.

6. While vomiting continues, the administration of food is useless and mischievous: rest is the one thing wanted in addition to the other points.

In the case here reported, the symptoms of collapse followed step by step upon the emission of fluid from the blood, and they passed away, as these emissions were checked and as fluid was reabsorbed. I believe this fairly

represents the history of all cases in which the symptoms are those of pure cholera in a subject of sound constitution, well conditioned tissues, and vigorous age. Under other conditions the pure symptoms of cholera do not develop themselves, and the case is blurred by anomalies, which, though incidental to the attack, are really due to defects of the patient's constitution. Thus, in extreme temperatures, subjects who are aged or weak-hearted, or whose tissues have been damaged by the use of alcohol, often die from syncope after discharges that would not have seriously disturbed a healthy subject at an age more tenacious of life. Only the night before my patient was attacked, a widow, over sixty years of age, died from cholera close by, at 75, George-street, Euston Road. In the same house there was then convalescing from cholera a younger woman, a member of the same family, who had been attacked just as badly a week before, but had survived, doubtless owing to her comparative youthfulness and greater vitality. In the epidemic of 1853 I remember a publican and his wife in the Whitechapel district who died in the same night, after a very few hours' illness, from cholera, and with comparatively little purging: but the fact was that they were both beyond middle age, and though ruddy and what is called healthy-looking, their tissues were so unsound that they at once broke down under the onset of the disease. Such casualties often throw valuable light upon the disease itself, but they do not furnish the materials for its true theory.



## INTEMPERANCE AND CHOLERA.\*

By ROBERT MARTIN, M.D., *Manchester.*

WE are assured, on tolerably good authority, that the terrible destroyer, cholera, which has already again and

again ravaged this country, is once more marching towards our shores. Now, forewarned is, or should be, forearmed, and many members of our profession have done the State good service by pointing out what are the weak parts in our sanitary defences,

\* Read before the Medical Section at the Annual Meeting of the British Medical Association, in Plymouth, August, 1871.

and showing on which of these the enemy's assault is most likely to be made. It may seem somewhat presumptuous and ungracious to say that in the letters and leading articles which have lately appeared it is doubtful whether the greatest source of the nation's peril has not been entirely overlooked. So far as I am aware, no writer has ever alluded to intemperance as a powerful predisposing cause of cholera, yet it is certain that, both directly and indirectly, it tends to promote the occurrence, spread, and fatality of zymotic disease in its most malignant form. Now that, in the enumeration of preventable causes, this should be overlooked, would be most unfortunate. Thousands may strike on this unbuoyed rock, on which thousands have already struck and been wrecked. It will be comparatively useless to lavish large sums of money on sanitary operations, the erection of hospitals, the appointment of trained nurses, if an agent so directly provocative of zymotic disease is allowed to operate unchecked.

The better to comprehend the bearings of this question, it will be well to give a passing glance at the sequelæ of intemperance.

1. *Indigence*.—The intemperate man burns the candle at both ends, he wastes time during which the means of providing for his family should be earned, and he squanders much of the little which he has earned. He is, therefore, miserably poor; he and his family suffer frequently from lack of food, and that which they do get is often bad in quality. It is for this class that the stink butchers—the dealers in diseased flesh-meat and tainted fish—chiefly cater. The half-famished are glad to seize on any garbage whereby the pains of hunger may be appeased.

2. *Overcrowding* is another of the conditions most frequently associated with cholera outbreaks, where persons are found huddling together, purity of air, cleanliness of person, are all but impossible, it is in the drunkard's lair that we find this evil most strongly marked. He cannot, or will not, pay

for a decent lodging, his family have to take refuge wherever they can, often in foul damp apartments. Again, not only does overcrowding favour the outbreak of epidemic disease, but more than anything else it tends to promote its spread. Until men, women, and children live like human beings, instead of herding like pigs in close pent-up styes, they will be liable to be ravaged by epidemics. Until families are located in roomy dwellings, where each individual can have something like the cubical space which we give to convicts or paupers, we shall be kept in a state of alarm, shall be disgraced by the outbreaks of pestilence—amongst the surest indications of residuary barbarism. It is well known that animal poisons are intensified by concentration. Hence, as regards effluvia, the law may be thus expressed:—As the square of the distance separating those infected diminishes, so the infecting power of the poison increases. So long as people are crowded into filthy apartments, it will be impossible for the sanitary authorities to stamp out pestilence. But if roomy dwellings are to be provided they must be paid for, but if people are to be in a position to pay they must be industrious and sober; they must also be orderly in their conduct and careful in their treatment of property. Whilst vast numbers of the working classes are addicted to habits of drunkenness they will not pay rent, their brawls and midnight revels drive away respectable tenants, the children of the drunkard are frequently recklessly destructive of property. Hence capitalists will not build cottage property, and those who possess it are glad to turn it into workshops or stables, &c., or pull it down and appropriate the ground to some other purpose. If drunkenness were less rife amongst the working classes, dwellings would be freely provided for them as well as for the class above them. For a variety of reasons, therefore, overcrowding must be chiefly debited to intemperance.

*Filth* is another agent strongly favouring the development and spread

of cholera. But filth is too often a direct result of intemperance. The drunkard's wife is too often a spirit-broken creature, lacking food, enduring cruelty, obliged to nurse sickly children, or having to struggle to maintain them; who can wonder that she is slatternly and dirty in her home? Is it reasonable to expect women to keep their families and homes cleanly who return at night, fagged with a day's washing or hawking, or factory or field labour, to which she is driven through the idleness of a drunken husband? But in the lowest deep there is a lower deep, when the wife and mother is herself a drunkard. An example of this was presented lately in the case of the family at Ilford, where a man was found on the floor in one apartment who had been dead a week, whilst his wife lay drunk in the next room amidst filth and stench which were sickening. Now drunkenness amongst females is terribly on the increase. A more humiliating confession, or a more ominous one, could not be made. Liverpool is the most unhealthy town in the kingdom, and in no part does female drunkenness so greatly abound or increase so fast.

But it is the poisonous effects of alcoholic liquors which most directly open the doors for pestilence to enter. The depression which follows the free use of liquor, the loss of functional balance, the retention of effete matters, the enfeebled circulation, the torpid liver, and weakened digestion, the generally lowered tone of the system, all favour the development of zymotic agents.

During the cholera-visitation of 1832, the nurses in the Manchester Cholera Hospital were at first allowed to go home each day at certain intervals. This arrangement gave them the benefit of a certain amount of out-door exercise and change of atmosphere, as well as relieved the tedium of their duties; the mortality, however, amongst them was so great that it was feared that the supply would fail. It was discovered that, with the idea of protecting themselves against the disease, they indulged freely in

liquors; they were therefore confined to the hospital, and debarred from obtaining more than a small allowance of alcoholic drink, after which not a single fresh case occurred amongst them. Here we see that, notwithstanding far less favourable hygienic conditions, there was an immunity from cholera attacks when there was a greatly diminished consumption of alcohol.

Cheerfulness is undoubtedly one of the best defences against cholera, as depression is one of its most effective allies. Nevertheless, joyousness associated with the free use of liquors, as is so frequently the case in this country, may be productive of very adverse results. When the cholera-visitation of Glasgow (1832) was dying out, the jubilee was held to celebrate the passing of the Reform Bill. This gave rise to a considerable increase of drinking and drunkenness; the result was that cholera, which was nearly extinct, burst forth afresh, causing considerably increased mortality.

During the second epidemic, a great increase in the number of deaths from cholera took place during and after the New Year's festivities. At Gateshead, the week after Christmas-day was signalised by a most terrible fatality, which was obviously attributable to the drunkenness which prevailed in the town; one of the worst streets of which was said to be swept of confirmed drunkards from one end to the other, with very few exceptions.

At the close of the cholera-visitation, as experienced in Liverpool in 1866, Dr. Shearer, in his Report to the Toxteth Board of Guardians, thus wrote:—

"Of all the physical causes predisposing to cholera, indulgence in intoxicating liquors is the most powerful. This was proved on a large scale by the number of applications on the Sundays, Mondays, and Tuesdays, being from seventy to a hundred daily in excess of the number of applications on other days of the week. I have no hesitation whatever in tracing this terribly significant fact to the

drunken orgies of Saturday night, Sunday, and Monday, which follow the weekly receipt of wages on the part of the labouring community."

The cholera-attack on the metropolis told, in 1866, with terrible effect on the East of London, more especially over the Limehouse and Ratcliff districts. Mr. Orton, the Medical Officer of Health, in his report, states: "Those who have been water-drinkers, teetotalers more especially, have been pre-eminently exempt." Again, in his report for the year ending Lady-day, 1867, after an enumeration of the facts connected with the outbreak, he declares: "That the drinkers of stimulating liquors, both fermented and spirituous, all other conditions being equal, were pre-eminently the sufferers and victims during and arising from the epidemic."

One of the most terrible examples of the effects of drunkenness and its accompaniments in promoting the spread of cholera was associated with the terrible outbreak at Liverpool in July, 1866. Dr. Trench, the Medical Officer of Health, received information on Monday, July 2nd, that a death from cholera had occurred on the previous evening. This was the first case, the victim being an Irishwoman. The friends resolved on waking the corpse. The body was laid on a board; and in the apartment scores of persons (men, women, and children) ate, drank, and slept, the orgies being kept, amid drunken and profane revelry, during day and night. The whole place reeked with the

loathsome and disgusting emanations of drunken and unwashed bacchanals. Drunken women squatted thickly on the flags of the court, before the open door of the crowded room where the corpse was laid. Before a week had passed, the husband of the woman was among the dead; and before the end of July, forty-eight persons had died from cholera within a radius of a hundred and fifty yards from the court which had been the scene of the ill-timed revelry.

Numerous facts teaching a similar lesson could easily be added; those cited will, however, suffice to show that, in taking means for preventing the advent or spread of cholera, the utmost efforts should be used by the authorities for limiting the facilities for procuring intoxicating liquor. When an attack is impending, intemperance ought to be most stringently dealt with. The drunkard is a source of the greatest danger to himself and to the community. The utmost efforts of the authorities, and the most lavish expenditure of funds, may be neutralised by the reckless conduct of a few intemperate persons. Every means ought therefore to be taken in order to prevent drunkenness.

It is not intended to imply that the attention of the authorities should be confined to the promotion of temperance—every hygienic method should be employed; but incentives to intemperance must be especially repressed—indeed, as far as may be practicable, suppressed.

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## Notes and Extracts.

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A TRAVELLER'S TESTIMONY.—I have acted on the principle of total abstinence from all alcoholic liquors during more than twenty years. My opinion is that the most severe labours or privations may be undergone without alcoholic stimulants.—*Dr. Livingstone.*

ALCOHOLIC TINCTURES.—The Islington Guardians, through their chairman, disapprove of tinctures being ordered by their doctors, and supplied to their dispensaries, on the ground that they lead to habits of intemperance.—*Medical Press and Circular.*

THE CITY OF SUICIDES. — This title no longer belongs to this metropolis, if it ever deserved the sad appellation. The ratio of suicides has been established by M. Decaisne recently, before the French Academy of Sciences. It is in London only one in 175 deaths; in New York one in 172; in Vienna one in 160; but in Paris it has reached one in 72. The number of suicides from drunkenness, which in 1848 was 141 for all France, reached 401 in 1866.—*British Medical Journal*, Aug. 26.

FIVE HUNDRED PHYSICIANS BANQUETING WITHOUT LIQUOR.—We are glad to notice that at a banquet given by the Physicians of Philadelphia to the American Institute of Homœopathy, at the Continental Hotel, in Philadelphia, on Thursday evening, the use of liquor was discountenanced. The president, Dr. Beckwith, of Cleveland, Ohio, said, in referring to the bill of fare, he saw “coffee and cognac” among the desserts; but that he hoped, though they might freely call for the coffee, none of the physicians present would addle their brains by the use of wine. His remarks entirely stopped the use of it—to the credit of the physicians present be it said. There were about five hundred present.—*Pennsylvania Vindicator*, June 15, 1871.

PREVENTION OF CHOLERA.—As a valuable adjunct during the epidemic, the following orangeade, suggested by Dr. Waller Lewes, has been extensively used with excellent effects:—

*Sulphuric Orangeade useful in  
Cholera times.*

Concentrated compound  
infusion of orange-peel 3 oz.

Simple syrup ... 12 oz.

Boiled filtered water ... 4 gals.

Mix well and add 3 ounces of dilute sulphuric acid. A wineglassful may be taken for a draught with the addition of more or less of filtered water according to taste. Of this beverage 1,350 gallons were consumed with the best effect among the men of the London Post Office during the epidemic of 1866. It superseded to a great

extent raw water and bad beer; its cost is only 4½d. a gallon. The idea is excellent, as in hot weather men drink anything, and this fluid supersedes noxious waters.—*Registrar-General's Report*, Aug. 26.

PROFESSOR DAVIS ON ALCOHOL.—Professor M. S. Davis, of Chicago, has made numerous and repeated experiments to show the effects of alcohol on the human system. Among those stated are its diminishing the atomic changes in the tissues of the body and the sensibility of the nervous system, and also diminishing the temperature, the strength, and the power of endurance. Dr. Davis designates alcoholic drinks as anæsthetic and sedative—anæsthetic to the nervous system, and sedative to the properties of the tissue. As such they are capable of being used to fill a limited number of indications in the treatment of diseases, and yet there are other well-known agents in the materia medica that will answer the same purpose equally well or even better. So true does he deem this assertion, that for twenty years he has not prescribed for internal use the amount of one pint of alcoholic drinks annually, including both hospital and private practice.—*Pall Mall Gazette*.

INTEMPERANCE AND BRIGHT'S DISEASE.—At the annual meeting of the British Medical Association, held at Plymouth, Dr. William Roberts, of Manchester, read a paper “On Intemperance as a cause of Chronic Bright's Disease.” The author said that the generally received opinion that the abuse of alcoholic liquors is a frequent cause of Bright's disease has been called in question by Dr. Dickinson, in an elaborate argument in his recent work on Albuminuria; and the scope of the paper was to examine the evidence on which Dr. Dickinson had relied in coming to an opposite conclusion. The writer endeavoured to show that the pathological facts adduced by Dr. Dickinson were either untrustworthy or that they had been incorrectly interpreted. Dr. Roberts especially pointed out the fallacy of

the argument drawn from the reports of the Registrar-General. It was quite true, as Dr. Dickinson had stated, that the districts which yielded the largest returns of deaths from intemperance did not return an excessive proportion of deaths from Bright's disease; but exactly the same result was obtained when the same statistics were applied to the mortality from cirrhosis of the liver—a disease which is notoriously and chiefly the product of intemperance.

**THE TREATMENT OF HABITUAL DRUNKARDS.**—In the House of Commons, on the 12th July, Dr. Dalrymple moved the second reading of his "Habitual Drunkards Bill," the object of which was to detain habitual drunkards, and put them under proper management. After some discussion, the Home Secretary objected to the bill, both in principle and details, on the ground that the former was novel, and the latter were impracticable. He trusted the hon. member having charge of the measure would not press the second reading, but would, at the commencement of the next session, move for a select committee to inquire into the whole subject. Dr. Dalrymple withdrew the bill, and on the 14th July a select committee was appointed to consider the best means of dealing with habitual drunkards. Dr. Dalrymple has since left England for Canada and the United States, for the purpose of observing the means adopted in that quarter of the world for the treatment and reformation of habitual drunkards. He expects to be able to collect a large body of information on the subject, and may not improbably induce some American gentlemen to give evidence on the question next session, before the select committee.

**DR. JOHN FOTHERGILL'S TESTIMONY.**—Medical men have a duty to perform with respect to the temperance reformation, which involves both physical and moral responsibility. Hitherto, it is feared, their influence has tended to stamp upon intoxicating drinks, a value, as medicinal and prophylactic agents, greater than they

deserve. Too little deference has been paid to the moral scruples of members of temperance societies when declining to take them, and especially when the individuals objecting are reformed characters, or anxious to become so. Numerous instances have occurred where the good resolutions of such have yielded to the thoughtless and cruel manner in which they have been urged to take wine, malt liquor, or spirits, by their medical advisers. Perhaps the individual has been a drunkard, and strong drink may still be a besetting temptation, which, with proper encouragement, he may be able to resist; but not so when, in addition to appetite, he has to contend against professional advice. "Oh," says the doctor, "but you know you will take it as a medicine. You will not break your pledge; you know you are allowed to take it medicinally." Now such individuals are frequently in a condition in which they can abstain, but they cannot observe strict moderation; yet, knowing all this, the drink is praised, temperance reformers are ridiculed, and the prescription persisted in. Instances of this description are numerous.

**HABITUAL DRUNKARDS IN FRANCE.**—A deputy of the National Assembly of France has submitted to the Assembly a project of law regarding drunkenness, and the best means of putting down that vice; and the House has agreed to take the matter into consideration. The bill proposes that for a time, and as a punishment, habitual drunkards should be deprived of their civil rights; and thus the worthy deputy seems of one accord with Dr. Dalrymple. The national sobriety of the French has been their boast for centuries; and their almost entire freedom from a disgraceful vice was the more commendable, as, until recently, it appeared quite compatible with their acknowledged genial conviviality. The French, as a people, though never total abstainers, did not get tipsy; France, though temperate, was never at any time a teetotaler. The French, until recently, were accustomed to take their wine like gen-

tllemen, but declined to be turned into hogs by that illustrious magician, Circe, simply because they paid their moderate *devoirs* to the God of wine. Is it that the English "luxury" complained of by General Trochu has taken the form of inebriety? It is said of the First Napoleon that there was a settled idea in his mind that the English people were continually tipsy; so, one morning, being desirous of paying a high compliment to the wife of a member of council at St. Helena, his first inquiry of the lady was, "How often does your husband get drunk?" What would the great Corsican have thought of France in this year of grace? for, be the causes what they may, concurrent testimony confirms the report that the French are no longer a sober people; but whether the bill of the honourable deputy will have the effect of reclaiming them to the paths of temperance is an exceedingly doubtful question. Some malignant fate seems to have steeped them to the lips in that fiendish compound—gunpowder, petroleum, and brandy.—*Medical Times and Gazette*.

ALCOHOL AND ABSINTHE.—There has been within the last few years much controversy touching the noxious properties of absinthe, some medical writers attributing a special injurious power to the substance, whilst others ascribe the evil effects consequent on absinthe drinking exclusively to the alcohol which enters into the composition of the liquid. This much vexed question has been considerably elucidated by the researches of M. Magnan, head physician to the lunatic asylum of St. Anne, who has had a very wide field for observation, and whose clinical and experimental researches on the subject seem to be very conclusive. In 1869 M. Magnan had already published a note, in which he pointed out the distinctive features of the consequences which result from the excessive use of alcohol and absinthe. Since then the observation of about 250 fresh cases has enabled him to confirm the conclusions at which he had previously arrived. From the

mass of information which has thus been brought to bear upon the question we gather the following important statements, thus briefly summed up:—(1) Subjects suffering from acute alcoholism with epileptic attacks are almost invariably addicted to the excessive use of absinthe. (2) Patients suffering from acute alcoholism without epileptic fits, but with trembling, whatever its degree of intensity, habitually drink wine or brandy. (3) It may therefore be put down in a general way respecting acute alcoholism, that alcohol produces delirium and trembling, whereas absinthe (alcohol and wormwood) brings on delirium, trembling, and epilepsy.—*Paris Correspondent of the Lancet*.

TEETOTALISM IN THE HOSPITAL.—Mr. P. R. Yewen, writing from the Abernethy Ward, St. Bartholomew's Hospital, 30th June, 1871, said:—"I was admitted to this hospital on the 9th May (after lying on my bed at home for three weeks), with large popliteal aneurism. The house surgeon told me (as did the surgeon who attended me at home) that the operation I should have to undergo was a dangerous one. When I told him that I was a teetotaler, he said, 'Then half the danger is over.' Yet, on making out my diet list, he ordered porter: this I declined, and instead he ordered beef-tea, milk, and arrow-root. On the following Saturday, before being carried to the operating theatre, the ward sister offered me brandy. On my refusal, and giving my reasons, she said it was usual to give it to patients about to undergo operations, but I need not take it unless I chose. My support on going into the theatre was especially derived from the language of the psalmist, in 23rd Psalm, from the 3rd verse, and the assurance that as I was in the Lord's hand, His grace was sufficient for me, so my trust was in Him. I prayed that I might be sustained, and that I might be resigned to His will. I was placed under the influence of chloroform, and the operation—that of cutting the thigh down to, and tying, the femoral artery—was per-

formed by Mr. Savory, a surgeon of the highest reputation. Since the operation, I have, under the Divine blessing, made steady progress towards recovery. On the tenth day from the operation, the ligatures came away, and since then the wound has fairly healed, except for about half an inch in length: this is closing; the tumour is gradually subsiding. I am now expecting every day to receive my discharge, although, as Mr. Savory tells me, my leg being bent when I came in, it will be a work of time to straighten it. So it may be some months before I shall be able to dispense with crutches. While going through the wards, on more than one occasion Mr. Savory has directed the attention of students to my case, expressing pleasure at the manner in which I have been going on, and referring to the fact that I have had no alcoholic stimulants, but have had beef-tea, arrowroot, milk, &c. Since I have been able to be about, I have heard that a surgeon, referring to me before the operation, said he would 'not give a straw' for my life, but when he was told that I drank no intoxicating liquors, he said, 'Then all the chances are in his favour.' The probabilities are that a man who drank to any extent would sink under the operation, or he might linger a few weeks; on a drunkard they would not attempt the operation, but an abstainer has everything in his favour."

ALCOHOL A CAUSE OF INSANITY IN FRANCE.—The question of the ill-influence of alcoholic drinks is now a principal one among those occupying public attention in France, all kinds of evils, whether political, military, or social, having been explained of late by their abuse. M. Théophile Roussel, who is member alike of the Academy of Medicine and of the Chamber of Deputies, recently read a long communication before the former body, which, it would almost seem, he must have mistaken for the latter, as it related chiefly to the legislative measures necessary to arrest the course of drinking habits. One of the latest papers on the subject is that of

M. Lunier, read at the Academy on the 22nd August in which he considers the part which alcoholic drinks have played in the increase of the number of cases of insanity. From the facts which he enumerates, he concludes:—1. In the North-east of France, the departments which do not cultivate the vine are those which have been first invaded by the alcohols derived from beetroot and grain. There the consumption of wine has remained almost stationary, and that of cider is on the decrease, while the consumption of alcohol has doubled or tripled within the last twenty years. 2. The departments of the same region which do cultivate the vine have resorted to alcohols derived from other sources only at a later period, but even in these the consumption has almost everywhere doubled. 3. In this region insanity arising from drinking has considerably increased in frequency, having attained in some parts the proportion of 41 per cent. among the men, and 21 per cent. among the women. But while in those departments in which the vine is not grown the increase has occurred chiefly among females, in the others it has scarcely been sensible among them. 4. In the Department of the Orne, which does not produce wine, but where beetroot alcohol is distilled, almost as much spirit as wine is consumed, and almost as much was consumed twenty years since as now. Consequently the proportion of cases of insanity from drink has for a long time been considerable (13 per cent.), and has not much increased during fifteen years, what increase there has been having taken place exclusively among women. 5. In the East, where more wine is grown than is consumed, and where some years since no brandy was known except that made from the grape in the country itself, the results, in relation to insanity, were nothing alarming; but since the alcohols of the North have penetrated there, the insanity due to drinking has increased in a very strong proportion. 6. In fine, alcoholism plays a very preponderant part in the increase of the number of cases of in-

sanity, and constitutes in this relation, as in so many others, a serious danger for society, and especially in the Northern and North-eastern departments.—*Medical Times and Gazette*.

CONSUMPTION OF WINE AND BEER IN WORKHOUSES.—Some paupers, presumably delicate, and perhaps some persons delicate or otherwise, but at present unknown, have been consuming intoxicating drinks to an incredible extent at the West Derby Workhouse, Liverpool. The whole population of the workhouse is under one thousand, but no less than thirteen hundred pounds' worth of excisable liquor is said to have been consumed for the past twelve months under medical certificate. As a larger workhouse in Birmingham consumed but ninety-eight pounds' worth of liquor, a special committee has been appointed to inquire into the matter.—The consumption of intoxicants in the Cork Workhouse has risen to so alarming a height that a committee has met for the purpose of inquiring into the matter. In five years ending September, 1870, £4,157 19s. 11d. of the ratepayers' money has been expended in strong drinks supplied in the workhouse. When the committee met, an earnest appeal was made to the three doctors who were present to adopt a more enlightened course. Dr. Wherland said "he had some experience in the profession, and he was happy to say that he was not of the drunken school. He was not a teetotaler, and would give stimulants, but he was of the school who preferred lateral nourishment, such as new milk or beef-tea would give. But for the last twenty-five or thirty years there had been an alcoholic mania, of which the chief advocate was Dr. Todd, of London. There were before that the calomel and bleeding mania, which were now exploded, but they were succeeded by the alcoholic or drunken mania."—On Thursday, the 14th September, the St. Pancras Board of Guardians were occupied a considerable time in discussing a report of a committee appointed as to an extraordinary quantity of wine and spirits

which it had been discovered had been consumed by the officers of the workhouse establishment. From the returns upon which the inquiry had taken place, the following few items, showing the amount of brandy, wine, &c., consumed by officers of the workhouse from September 10, 1870, to September 5, 1871, will afford a sample of the whole:—Mrs. Davis, matron, 180 oz. of brandy, 960 oz. of wine, 54 oz. of gin, 21 bottles of seltzer, and 12 bottles of lemonade; Dr. Ellis, 60 oz. of brandy, 510 oz. of wine, 25 bottles of seltzer; Miss Griffiths, matron of Infirmary, 1,070 oz. of wine, 2 bottles of seltzer, 4 bottles of lemonade; E. Ward, engineer, 435 oz. brandy, 20 oz. of wine; Dr. Hill, 20 oz. of brandy, 200 oz. of wine; Mrs. Bedman, 104 oz. of brandy and 16 oz. of wine; Miss Waters, 248½ oz. of brandy, 28 oz. of gin, 14 bottles of seltzer, and 14 bottles of lemonade; Miss Smith, 68 oz. of brandy and 922 oz. of wine, 3 bottles of seltzer, and 12 bottles of lemonade; Miss Cain, 224 oz. of brandy, and 588 oz. of wine; J. Peel, dispenser, 115 oz. of brandy, and 152 oz. of wine; J. Davey, superintendent lunatic ward, 310 oz. of brandy, and 120 oz. of wine. Mr. Chandler moved the adoption of the report, which exonerated the medical officers, although the amounts appeared excessive, from using stimulants beyond what was necessary in accordance with the prescriptions of ordinary medical practitioners. An amendment rejecting the report was carried by a large majority.—The *Globe* informs us that "Birkenhead doctors are not so impracticable nor so oblivious of the value of temperance, as some people would have us believe. The Workhouse Committee of the Birkenhead Guardians have been 'looking round,' and have discovered that 2½ bottles of wine were consumed, besides brandy. They referred the result to Dr. Downing, who has reduced the consumption of wine to about a fourth of what it has been hitherto, and discontinued the brandy altogether. The Guardians look upon this as satisfactory. So will the rate-payers."

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LIVERPOOL AND ITS DEATH-RATE.

REPORTS OF DR. PARKES AND DR. SANDERSON ON THE SANITARY  
CONDITION OF LIVERPOOL, JUNE AND AUGUST, 1871.

SANITARY science is yet in its infancy. Worse still, it has had a belated birth. Grow as rapidly as it may, it can never now overtake the need and scope for its beneficent operation that have for ages been expanding and developing on every hand. Ours is proverbially the age of great cities. The late Census demonstrates as strikingly as any of its predecessors the steady tendency of our population to nucleate into towns, and aggregate itself, under favouring conditions, into vast commercial centres. London exceeds in population, and far exceeds in wealth and enterprise, many a respectable little kingdom. As in these features it leaves all other cities in the civilised world far in the rear, it will be found to be the best field of illustration, both as respects the difficulties sanitary science has to encounter, and the courage and success with which these may be grappled with. Its difficulties will occur to every one who knows the labyrinth of narrow streets and lanes that compose the city, where, in proportion as room and air come to be needed, the prospect of obtaining them is correspondingly diminished, owing to the enormous increase in value of the buildings that have got jammed together on little or no discernible principle beyond that of random agglomeration. And yet the success with which these difficulties have been met, and palliatives applied, is no less strikingly illustrated in the marvellous fact that London holds the foremost rank among cities in the bills of mortality. Carlyle somewhere speaks of "Omnipotent London as not able to sweep the dirt out

of her ;" and yet, with all the dirt and disadvantage that confessedly remains, what a rebuke and what an encouragement does she read to the best of that triplet of second sister cities, whichever that best may be, that pant after her abreast, far ahead in population of other cities, but further still in her rear—Liverpool, Manchester, and Glasgow. These of course have, in their manufactures and other industries, disadvantages peculiarly their own ; but in great part even these disadvantages are preventible, and therefore remain as a problem that demands immediate attention, and cannot now be other than too late solved, be it solved when it may.

One of these three cities, Liverpool, has for many years past shown a death-rate painfully and exceptionally high. This, of course, struck deep concern into the minds of her magistrates and thoughtful citizens, and prompted inquiry and varied action for the abatement of the evil. As one very needful step in this direction, they reconsidered and revoked the unwise and perilous policy of virtual Free Trade in the Sale of Liquors which had been inaugurated some years before, and the deadly fruits of which had only too soon and too amply appeared. In December last two of our foremost scientific men—Dr. Parkes and Dr. Sanderson—undertook at the request of the Liverpool Corporation to make an inquiry into the sanitary condition of the town. Their attention was called to the practice of filling up with ashes land intended to be built upon, to the state of the drains, sewers, closets, and ash-pits, to the system of scavenging in present operation, and in general to whatever bore on the sanitary interests of the town, and might indicate means for reducing the appalling death-rate. Armed by the authorities with full power to conduct the investigation as they thought best, and to enlist what aid might be needful, the two doctors proceeded to Liverpool on the 1st of March. The results of their investigation were presented to the magistrates in two parts ; the first in the month of June, and the second in the beginning of August. They had hoped to have been able to avail themselves of the light certain to be thrown on the subject by the recent Census, and for this end delayed their report ; but finding further delay inevitable before they could get at the Census results, they resolved to present the first instalment of their report, and give the fruits of the Census returns in the second part as soon as they could. Both these parts, comprising together their complete report, have, by order of the Council, been put in print.

The earlier instalments of the report, as less pertinent to our purpose, we shall dismiss in a few sentences. A careful analysis of the cinder-refuse showed, as was to be expected, some small proportion of organic matters ; but any danger thence accruing

was pretty well met by the recommendation not to permit the rubbish to be built upon till two years after it was deposited. On the sewers of Liverpool, which exceed in length two hundred miles, the Commissioners complain of the difficulty of access to them, condemn all communication into them from houses, urge free ventilation, and other things, in the course of which they say:—"We regard the prevention of the entrance of sewer-air into houses as an object paramount to every other in importance; for it is a matter of general medical experience that even a fractional contamination of the air of a sleeping-room is almost certain to produce disease sooner or later; whereas we know that in many towns (as *e.g.* the Metropolis) the air of the streets is polluted to a very considerable extent without any apparent detriment to the public health." They emphatically endorse all that Mr. Newlands, the town engineer, has testified of the defective means of flushing owing to the want of better water supply, and the need for more effective irrigation. They recommend inquiry, "complete and exhaustive," into the existence of deposits in the sewers (of which, in a photographic drawing, they give some telling samples), and that there shall be no inlets to the drains within the houses. They speak well of Liverpool, as superior to many towns in the matter of drains, and as having constructed these "with great care and cost;" and they deprecate any method other than the existing one by water sewerage for the disposal of fæcal matter, as apart from theory undesirable, even if preferable, unless those new methods "could be applied to the town as a whole." These and other things they elucidate in an ample Appendix, which contains some useful plans and tracings.

The second part of the report deals directly with the high death-rate, in the light of valuable documents, and especially of the Census returns, to which by this time the doctors have obtained access; "but," they add, "we have endeavoured to work out the question for ourselves." With this view, they state—(1) the mortality of Liverpool, as compared with other large towns; (2) the comparative mortality of districts in Liverpool itself; (3) the comparative mortality of certain streets in Liverpool; (4) the sanitary condition of those streets, and, by inference, of others like them; and finally, "the practical recommendations" suggested by their inquiry.

The mortality of Liverpool is given for the ten years, 1861—1871, during which it was never lower than 32·4 per thousand, and has mounted as high as 50·7. In the same ten years, the mean mortality per thousand, calculated upon the mean annual population of 1861—1871, was, in the six undermentioned towns, as follows:—Bristol, 22·5; London, 24·3; Hull, 24·9;

Bradford, 26·2; Sheffield, 27·2; Leeds, 28; Manchester, 30·2. The Commissioners divide the Liverpool mortality into the two categories of ordinary and extraordinary—meaning by the former the ordinary experience, which averaged 35 per thousand; and by the latter, times of epidemics when it has mounted up to above 50 per thousand. Birkenhead and Claughton contrast favourably with Liverpool, whose death-rate is to theirs as 7 to 4. Two dangers beset Liverpool—first, liability, as a great emporium, to the importation of epidemic disease; and secondly, local conditions which directly receive and foster it. Very frightful is the contrast presented by different streets, some of which, such as Addison and Sawney Pope Streets, have a death-rate as high as 45·4 and 55·86 per thousand. These are worse than St. Giles in London. Of course there are many streets in Liverpool as healthy as any in London. “What makes the great difference between the two cities is, that in Liverpool there is a larger proportion of streets with high mortality, while in London the mean mortality of the whole city is reduced by the preponderance of healthy streets and districts.”

We cannot follow our Commissioners further into these interesting statistical details. We may only mention that, on the painful subject of infant mortality, they give due recognition to the many cases of innocents overlaid and smothered by drunken mothers. They say: “There are other causes of infantile mortality which do not appear in the table. The smothering of infants by drunken mothers adds to the mortality;” in proof of which they refer to the evidence of Mrs. O’Brien and of Mr. Roberts, in pp. 146, 186, of the Report of the Mortality Subcommittee. It is a tragic and most telling fact, that the number of such smothering cases is greatest at the beginning of the week, as the fruit of Saturday and Sunday indulgence.

In specifying the diseases that have swelled up the mortality, bronchitis and phthisis are found prominent; but in this Liverpool is not peculiar. “It is marked (they say) in many other large towns, particularly in Glasgow, and enough is known to enable us to say that it is not dependent on climatic conditions: for example, as shown by Dr. Gairdner, it is far more common in Glasgow than in Aberdeen or Perth. Its causes appear, from Dr. Gairdner’s researches, not to be industrial in Glasgow”—that is, not specially connected with the inhalation of solid particles while at work. Nor do they think there is much of this in Liverpool. All this points the terribly urgent moral that the high mortality is due, not to necessary or inevitable, but to preventible causes—causes rooted in the vicious habitudes of heads of families; and especially into that tap-root and foster-parent of all other vices and of so many miseries—intemperance. This Drs. Parkes and Sanderson testify with no bated breath.

The philosophy of the case lies in a nutshell. The drunkard consumes on the altar of his debasing and selfish lust a large proportion—to many what will appear to be almost incredibly large—of his weekly income. This cuts off the means of properly feeding, clothing, and housing his offspring. They filter down into the lowest dens. They are crowded into fetid sleeping-rooms and suffocating beds, or pallets of straw. They are starved with want and starved with cold. And by all this they are both predisposed to disease and continually thrown in its way. Hence the holocausts of infants and children that are daily offered to the drink-fiend, who out-Molochs Moloch in the remorselessness of his gorge; who out-Herods Herod in the massacre of innocents.

The description given of those cellars and dens in this report is awful, and will, it is to be hoped, have important results. “Nothing could exceed the dirt of the people, and the fetid condition of the atmosphere at night. How human beings could tolerate such a state of things would be incredible, if we did not know the deadening influence of custom. The causes of this fetid atmosphere are the effluvia due to filth of the persons and clothes; the exhalations from the untrapped drains and wet floors of the cellars; the excretions of the skin and lungs which are not removed by ventilation;” and other and kindred causes of which the reader doubtless feels that he has had enough. One short sentence tells all, and conveys volumes in itself: “This increasing dirtiness [of house and person, which is said to be lamentably on the increase] is attributed to a great extent to increasing poverty and intemperance.” Who can doubt it? And this double cause is, after all, but one—namely, intemperance, which causes the poverty, and with it the loss of self-respect, and therewith dirt, degradation, disease and death.

Compared with these drink-produced and drink-perpetuated dens, the low lodging-houses where the tramp stretches himself after his weary walk are models of comfort. “We were not at all prepared,” say the investigators, “either for the wretched appearance of the people, or for the terrible aspect of poverty disclosed.” In many a room they found “literally almost nothing but the bare walls, a heap of straw covered by dirty rags, and possibly the remains of a broken chair or table. There were no cooking utensils of any kind, or only an old saucepan. In some cases, both of men and women, we made out that the clothes had not been removed for weeks. In our visit at nights, we sometimes found that the clothes had been partly removed, and were then drawn over the person. Some men, indeed, were in bed quite naked, lying on the straw, and covered with their clothes. What admirable hotbeds of typhus and other epidemics

these places must be need not be stated. The Commissioners, of course, recognise the respectability and comfort of great masses of the labouring population in Liverpool, to which the candid and considerate reader will cordially say Amen; but they affirm that the relative number of those dens and of the people who burrow out a miserable existence in them, "is much greater in Liverpool than in other towns of which we have knowledge."

Drs. Parkes and Sanderson now came to the causes of these social plague-spots; and very important it is to hear their verdict. "All to whom we have spoken," they say, "attribute it to three circumstances—the irregularity of the labour market; the improvidence and careless habits of the people, and especially of the Irish; and the great intemperance." Of these three causes, the last two very much coalesce in one—the prime factor in the production both of "improvidence" and of "carelessness" being undeniably intemperance. True, there are people who, by nature or by training, are characteristically improvident and careless; but if they keep clear of indulgence in drink, their improvidence, amounting chiefly to bad management, will not cause misery so extreme, so persistent, or so irremediable. It is only intemperance that degrades families to such awful depths; and it is only persistent intemperance that keeps them there. Let any of them abstain, and the star of hope and noble aspiration at once rises over his long-desolate and tempest-tossed spirit. Self-respect, "that column of true majesty in man," begins to rear itself, and not many months will require to elapse before the very home will testify to the self-recuperative power of that career of moral revolution on which he has embarked.

As for "irregularity of the labour market," we are unable to assign to it much causative influence in the production of such dire results. They are results, indeed, into which nothing of that kind could precipitate a man; into such depths it is only the man that can precipitate himself. A Liverpool contemporary justly says on this head: "Skilled workmen, however drunken, are rarely out of employment, and if our readers will make inquiry into the state of the labour market of any of the trades of the town, they will find there is constant difficulty experienced by employers in keeping their staff of workmen up to an efficient standard. With dock and other labourers experience tells us that although there are times when work is irregular, as in long succession of east winds, &c., yet, taking the year round, the vast majority of labourers make, with overtime, fully six full days to the week. But Dr. Parkes and Dr. Sanderson's report states very plainly that intemperance tells indiscriminately on both the regularly and irregularly employed." This last remark is alike important and true. The most prominent and striking thing in

the testimony of these eminent and scientific men is the almost incredible sums they discovered, in their own independent and personal inquiries, as consumed by habitually intemperate men in regular and well-remunerated employment. As regularity of employment did not avail, with that bad habit, to make them comfortable, so irregularity of employment, to whatever extent it may be imagined to go, could never, with habits of sobriety, have sunk them into those hideous depths.

But let us hear Drs. Parkes and Sanderson themselves. Their testimony on this point is fresh, personal, and authoritative, and therefore we quote it at length:—

“Following our course of independent inquiry, we endeavoured to make out what part intemperance played in producing this poverty and all its attendant evils. We cannot doubt that it plays a very large part. We have, in our notebook, the replies given by many of the poor people whose rooms we entered. Many of them at once attributed their condition to drink; others owned it on being pressed on the matter. Several women gave an exact statement of what their husbands earned, and what they brought home. We select two examples of workmen, in whose cases there was no irregularity of employment. A tin-plate worker in constant employment earns 22s. a week. He has a wife, evidently a careful, respectable woman, and four children. In reply to questions, she said he drank a little, then owned ‘he drank very heavy.’ ‘Sometimes he brought home 18s., sometimes 16s., and sometimes 12s.; last week he drank it all. If he would bring 22s. a week, she should be happy as the day is long.’ This family (six persons) were living in one back room, for which they paid 1s. 6d. a week; it was 10½ feet long, 9 feet broad, and 8¾ feet high; the furniture was a bed, table, and two rickety chairs. Two of the four children were sick. In the front room of the same house, the rent of which was 2s. a week, a man and wife, a daughter ‘aged seventeen, and a son aged fifteen, lived; the man earned 24s. a week, and passed his time in drinking hard, repenting and saving, and then drinking again; the wife ‘drank all she could get.’ The son and daughter earned next to nothing.

“Here we have two cases of constant employment and good wages associated with utter poverty, to end, no doubt, in relief from the rates and death in the workhouse.

“When the occupation is uncertain, like that of the dockyard labourers, the case is nearly the same; the temperance which is enforced from time to time by destitution is compensated for at the first opportunity on the return of plenty.

“Instances of this kind seem to occur so frequently in all the poor districts of Liverpool, that we question if 20 per cent. of the labouring class in these streets are leading lives of ordinary restraint and decency.

“It does not appear that the bad trade of the last few years has lessened the amount of drinking: all agreed that there is much more than formerly.\*

“In order to form as correct an estimate as possible of the amount of drunkenness in certain parts of Liverpool, we applied to a source on the accuracy of

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\* “In order to collect evidence, we applied to various parties, and, among others, we were advised to apply to a man who had been a landlord of a small publichouse in one of the selected streets. He had lived for years in the district, and knew intimately the habits of the people. He told us that ‘for one man who did not drink, there were fifty who would take their share; they starve their wives and children, and must beg if they want a bit.’”

which we place the greatest confidence, although we are not permitted to name it.

"Data connected with most of the houses in one of the apparently most destitute streets were submitted to us; the large wages which can be earned with comparative regularity, and the amount which is spent in drink, are astonishing. One or two instances of the worst kind (if there is really any distinction) occurring in the same street may be cited.

"A man earns 27s. regularly, and spends as regularly 21s. in drink; his four children are in rags.

"In another instance, the wages are 30s. a week regularly; the father and mother are both drunken, and three children are half-starved and in rags. In another house is a copper-ore worker, earning 27s. a week, all of which is spent in drink by himself and his wife. The children are in rags and filth, and look idiotic. In the same street there are sober men, earning only 20s. and 23s. a week, who are living in comfort.

"It is not surprising that our informants, who, as we stated, have the fullest information on the habits of the people, say decidedly that 'drink and immorality are the two great causes of the mortality.'

"We have, then, a population who are living in houses originally badly planned, and very closely crowded together, and who are placed, partly by their own faults, partly by circumstances, in conditions which necessitate their breathing an atmosphere which is highly fetid from several causes.

"The unhappy people seem to know none of the comforts, and few of the decencies of life, and widespread habits of drunkenness, and consequent want of food, aid their wretched homes in destroying their health."—Pp. 66-68.

These are the services that the medical profession are pre-eminently qualified, and therefore specially bound, to render to the cause of Social Science. "In this matter," said the *Lancet* lately, "we are the priests of society to whom confessions are made that are withheld from relatives and other priests. Sometimes we see the genesis of the habit of drinking. Very often we know of its furtive indulgence when no one else suspects it. And in the end of cases we only can know the destruction and degeneration of tissue and of organ which result, spoiling every function of the body, and blighting every faculty of intellect and imagination." It then refers to the document we have been summarising in these terms: "If any medical man is still unconvinced of the great influence of this factor in the production of the disease and death of our population, or disposed to treat it with indifference, we commend to his notice the report of Dr. Parkes and Dr. Sanderson, only confirming those of Dr. Trench, on the Sanitary Condition of Liverpool, in which they emphasise the intemperance of that town as one of the three great causes of the deplorable condition of the poor in it."

The sum of the whole matter is, that the Temperance question is, in Liverpool and everywhere else, the core of the Social Progress question. That badly constructed, badly ventilated, overcrowded hovels predispose, by the languor they induce, to alcoholic indulgence, is true and intelligible enough. But the converse proposition, that alcoholic indulgence is the grand force that drives men into these hovels and pins them down there, is

also true, and is by far the larger and graver truth. Cause and effect, in such cases, act and react on each other. The pith of the tragedy, however, lies in this, that men get into these "horrible pits" by drinking away the resources that could easily keep them out of them, and there drink away their self-respect and strength of will, and settle down into the mood of grim and brutish despair. Suppose every street were constructed anew on the most improved sanitary principle, and every workman's house built and furnished as a very model, the occupants might, under divers temptations, become victims of strong drink; and if they did, their model houses would speedily become, first dirty, then desolate, then unsanitary and insalubrious in every conceivable degree. The evil is moral and central; and the remedy must begin there.



## PROGRESS OF MEDICAL OPINION RESPECTING ALCOHOL.

THERE are various ways of viewing the Temperance question. It is a political question, a religious question, and, we think, a medical question. At the present time the political bearings of the question are being freely discussed at public meetings and in the columns of our newspapers; and many persons look to the Legislature for a remedy for the widespread evil of intemperance. There is a danger that the present excitement as to legislative remedies may divert attention from the medical aspect of intemperance, and from the fact that the most effective way to cure the disease is to remove the cause. Although there may be various influences leading to the use of inebriating liquors, the essential cause of intemperance is the poisonous action of alcohol upon the brain, and the best remedy that has yet been propounded is to cease using the drinks that contain alcohol. But before this remedy will be adopted the people must be enlightened. The popular delusions as to the dietetical and medicinal virtues of alcohol must be removed, and the composition and physiological action of alcoholic drinks must be made generally known. Alcoholic liquors have been drunk, not in consequence of investigation into their nature and effects, but from the want of it. It has been assumed that they were necessary and useful as articles of diet, and of special value in the treatment of disease, and the result of this want of inquiry has been the con-

sumption of these liquors by all classes of the community, and, we are sorry to add, it has also been the cause of the routine and indiscriminate prescription of these liquors by the medical profession. There are, however, signs of improvement. Temperance reformers have not laboured altogether in vain. They have demonstrated as clearly as anything can be by experience, that the most perfect health and strength may be maintained without the aid of alcohol. They have also diffused a vast amount of useful information in reference to the evil results of the use of alcoholic liquors and of the physical and social advantages of abstinence. These efforts at popular enlightenment have corrected many of the false notions of the public as to the virtues of strong drink, and have convinced many of the absurdity and evil consequences of the reckless use of alcohol in the treatment of disease. A belief in the wonderfully curative power of alcoholic liquors has been one great cause of their general use, and this belief has been created and kept up by the common and unnecessary prescription of wine and other alcoholic drinks by the profession. A grave responsibility rests upon a medical man who, without consideration, recommends his patients to take wine or other intoxicating drinks. To some patients such a prescription would lead to fatal results, and in others it would uphold the vulgar notions as to the value of these drinks. A great change, we are happy to know, is taking place in reference to the use of alcohol in disease. It is not now so largely used nor so carelessly prescribed as formerly, and some medical men have almost entirely renounced its use. The great meeting convened by the National Temperance League in Exeter Hall in October, which was addressed by six medical men, was an encouraging sign of progress. These gentlemen, fully qualified by their education, their professional standing and extensive practice, testified to the great facts that alcohol is altogether unnecessary as an article of diet, and seldom of service in disease. Indeed, one of the gentlemen said, "For thirty-seven years not a drop of intoxicating drink has entered my system, and for thirty-seven years I have not used a single drop as a medicine." No one has attempted to show that this gentleman and his patients are any the worse for this abstinence from strong drink. The whole of the speeches at the meeting were deeply interesting, and they showed that the use of alcohol in disease calls for investigation and reform.

The medical journals have done something towards effecting a reform in the use of alcoholic liquors. The *British Medical Journal*, of the 30th September, contained an article pointing out some of the evils of intemperance and the power of medical men to diminish those evils. It says: "Looking to the ineffable misery and disaster, the waste, degradation, suffering, and crime

which are constantly wrought in this and most civilised nations by drink, we are far from thinking the importance of the subject can be exaggerated." It is without question the most important social question of the day, but what can be done to stay the plague? How may the disease be stamped out? What can the medical profession do in the matter? The *British Medical Journal* suggests that a conference of medical men of the highest class should be held to give the subject a thorough discussion. This is a most important suggestion, and the master minds of the profession could not be engaged in a more important work, whether we regard it from a scientific or a philanthropic and patriotic point of view. The questions proposed to be discussed are, "To what extent, if at all, are physicians justified in recognising alcohol as an article of daily food in health? Does the habit of prescribing alcoholic drinks act injuriously upon the morals and welfare of the people? Is it possible or desirable to substitute the more enticing forms of alcohol by medicinal and less alluring forms?" If these questions were seriously discussed, we believe that in spite of the influence of habit, and appetite, and fashion, the answers would be such as would satisfy the friends of temperance. What we complain of is not direct opposition—that we are not afraid of; but we complain of a disposition to go on in the old ruts of prejudice and routine, neglecting the light of science and practical experience. We are, therefore, thankful for every effort to promote investigation, and should regard a discussion of the subject as one of the highest professional interest.

The *Lancet* has at various times rendered service to the cause of temperance by articles on drinking and the use of alcohol. The number for the 4th November contained a valuable leading article on "The Medical Profession and Intemperance," which we have given in another part of this journal. The *Lancet* says: "We are exceedingly anxious that any assistance which medical men can render in the war which is setting in against bad drinking customs in society should be given." It is in the power of the profession to aid materially in the war with the "bad drinking customs." These customs have come down to us from ignorant times, and they rest upon prejudice and appetite. Medical men possess knowledge, and knowledge is power in questions of diet and health. Medical men have too frequently neglected to apply their knowledge to the promotion of temperance, and have inadvertently sanctioned some of the "bad drinking customs of society." The *Lancet* points out some of the ways in which this has been done, and gives some judicious cautions. We do not agree with all the positions of the *Lancet*, but we admire the spirit in which the article is written, and look upon it as an aid to our

efforts to promote a reform in the medical as well as the popular use of intoxicating drinks.

The *Medical Times and Gazette* of the 25th November had a leading article on "How are we to check Intemperance?" which contained some fallacies we hardly expected to see gravely put forth in a medical paper. The *Medical Times and Gazette* does not appear to understand that intemperate drinking and drunkenness are caused by the use of alcohol, but assumes that it is caused by drinking in taverns and publichouses, and that if the liquors were consumed at home in the family circle there would be no drunkenness. But we hold that alcohol can gradually create an alcoholic appetite wherever it may be taken, and that in some persons this appetite becomes so powerful that their reason is too weak to restrain it, and they become intemperate. Further, that there are thousands of intemperate persons who never frequent taverns or publichouses. The houses offer temptations and facilities for drinking, but the taste, the desire for the drink, is generally owing to being taught to take these drinks in the family circle. When a person has acquired a liking for the drink, he will be ready to join the company of other persons in the same condition, and superficial observers may conclude that the mischief is in the house and not in the drink. We say, by all means reduce the number of publichouses, shorten the hours during which the drink may be sold: this may do some good, but the effective way to check intemperance is by waging war with the "bad drinking customs of society," and by ceasing to use the drink. As the *Medical Times and Gazette* cannot see that the danger is in the drink, or that wine is a mocker and can bite like the serpent and sting like the adder, it approves of the reduction of the duty on wine, and hopes that "any modification of the 'Licensing Act' shall make it possible for any seller of wines and spirits to hand over to the purchaser a sealed bottle, the contents of which cannot be consumed on the premises, but must be carried away for home consumption." It is strange that any one connected with the profession should put forth such nonsense, and fail to see that the habit of intemperate drinking is one of the effects of the cumulative action of alcohol, and that brain poisons can produce the same effects in the home as in the tavern or gin-shop.

Although the *Medical Times and Gazette* does not keep pace with the progress of knowledge, there are many signs that the medical profession is willing to aid in any practical measures which may be devised for dealing with intemperance. We have already adverted to the proposal for holding a medical conference. There would no doubt be some difficulty in bringing that about; but another movement has taken place of great importance. A document, emanating from the medical profession, has been

issued, signed by many of the most distinguished members of the profession, which proclaims in unequivocal language some of the views which we have always advocated. Never has the practice of indiscriminate alcoholic medication received so decisive a blow as has been inflicted upon it in the "Medical Declaration respecting Alcohol," which will be found in another part of our present publication. The admitted fact that "the inconsiderate prescription of large quantities of alcoholic liquids by medical men for their patients has given rise, in many instances, to the formation of intemperate habits," forms the basis of this very important document, and those who have signed it state that, while they are "unable to abandon the use of alcohol in the treatment of certain cases of disease, they are yet of opinion that no medical practitioner should prescribe it without a sense of grave responsibility. They believe that alcohol, in whatever form, should be prescribed with as much care as any powerful drug, and that the directions for its use should be so framed as not to be interpreted as a sanction for excess, or necessarily for the continuance of its use when the occasion is past. They are also of opinion that many people immensely exaggerate the value of alcohol as an article of diet, and since no class of men see so much of its ill effects, and possess such power to restrain its abuse, as members of their own profession, they hold that every medical practitioner is bound to exert his utmost influence to inculcate habits of great moderation in the use of alcoholic liquids." Any one who glances at the names attached to this remarkable declaration, will at once perceive that it emanates from no mere tyros in the profession, but from gentlemen whose high character and professional experience will secure for their opinions the thoughtful consideration of every intelligent person in the country. We regard this movement as a striking and encouraging illustration of the progress of medical opinion respecting a question that must be earnestly grappled with by all who wish to aid effectively in advancing the health and happiness of the people.



## SOLDIERS' WIVES.

By FRANCIS R. HOGG, M.D., *Royal Horse Artillery, Woolwich.*

WAR, terrible war, temporarily lulls—Napoleon lives in illustrious exile in England—France has learnt a bitter lesson—Prussia, too, equally in mourning, laments the rivers of blood, the frightful carnage, and the ruined homes. Victor and vanquished

now have time in vain regret to review the past—tearful mothers, wives, and children, have fully realised the loss of all and everything considered dear—no repentance, no prayers, can bring back the flower of youth and bravery, now without occasion in the dust. In the great contest, artillery played the prominent part.

Foreign critics have never denied that the Royal Artillery constitutes the most splendid portion of the British army, and the country felt justly proud of the ninety guns so well turned out not long ago at Aldershot. Many of those gunners were married men; many had good honest wives and splendid children, that a duchess would be proud of; but the medal has its obverse in grave mortality—frequent sickness, besides endless discomfort in the soldier's home. Having the honour and pleasure of belonging to this distinguished regiment (more especially in attending to women and children), curious is it to find that the colonel's boy, tended with every care, in a good house, with a sensible mother and an attentive nurse, will sometimes succumb to a trifling malady; whereas the child of a drunken father, perhaps of a helpless, draggle-tailed mother—neglected in a dirty, unwholesome lodging, or doubled up four families in a barrack-room, screened off by blankets—will as often recover from malignant fever.

Of women, 6 per cent. marry under the age of seventeen; about 20 per cent. have consumptive histories; about 40 per cent. have been abroad; about 15 per cent. are soldiers' daughters; about 5 per cent. only are barren: the fertility is frightful. From enquiries, 1,500 women have given birth to 4,744 children, of whom 3,378 survive; consequently 1,366 were lost. The life is a hard one: excepting themselves, no one can form any conception of the troubles endured wandering about the world, and in epidemics of cholera, diarrhœa, scarlet fever, whooping cough, and infantile ailments generally, their children fall easy martyrs. During dentition, 28 per cent. of children suffer from diarrhœa, about 18 per cent. from convulsions: either disease apt to turn fatal.

Recently, a strong, fresh, healthy woman, on cross-examination, afforded the following history:—Aged twenty-eight; ninth of sixteen children; born of English parents at Bangalore; mother healthy, father cancerous. Marries at fifteen; bears five children to husband, who dies of sunstroke; marries again at twenty-six, to bear another child. Her labours natural; no discomfort, no fever during pregnancy or lactation. Her children all in good health; cut their teeth without any inconvenience. Following her husband's rough and troubled fortunes twenty-six years in India, at times in the midst of cholera and other pestilential diseases, her only sickness was a mild attack of variola, which, thanks to vaccination, has not scarred her beauty. We all know

“ There is no flock, however watched or tended,  
But one dead lamb is there ;  
There is no fireside, however defended,  
But has *one* vacant chair.”

Yet this woman has preserved her six children.

Ladies and mothers of families, mark this little fact. She is a water-drinker; has never in her life tasted alcohol, and, what is more, never intends to do so.

Although medical services are seldom required in temperance homes, cases now and then occur, as a rule very amenable to simple treatment. From personal experience, remedies such as antimony, arsenic, iron, ipecacuanha, opium, bromide or iodide of potassium, quinine, strychnine, and zinc, marvellously obey the prescriber. That dangerous yet splendid weapon, calomel, must be given in minute doses. Alcohol, in certain instances or at particular stages invaluable, yet occasionally a deadly poison, requires special scientific study. Vaccinating also, whereas four abrasions are generally required, two appear sufficient for the infant of a water-drinking mother.

Last season, at the Queen's Ball, very interesting was it to notice the beauty of the aristocracy—the diamonds, rubies, emeralds, pearls, and the point lace; also, for once in life, to dance in the same room with princes, peers, statesmen, in short, the thorough-breds as well as the celebrities of England. Thinking it all over, the drive from Buckingham Palace to the barracks at Woolwich appeared but a moment. In the passage of bachelor quarters, whilst rummaging under the mat for the latchkey, a voice out of the darkness broke the reverie. “ Please, sir, will you come and see my little child, who is dying in convulsions? I am ill myself and in sad trouble; for my husband, a sergeant, was reduced this morning.” Alas! the old, old story. There is no occasion to describe *that* scene of misery—the drunkard's home. The child was very ill, and died before the morning. In Kingsley's language, it does not horrify or shock us to see a man dying in a good old age: he has played his part, and must yield the stage to others. But it is a distressing thing to see children die. What that boy might have been! What he might have done! What position he might have reached! But, as the poor mother told her little girls, the angels take better care of him now in the bright stars above.

This summer, riding through the Shooter's Hill Wood, seeking an hour's respite from sick rooms and sad scenes in the enjoyment of fresh air and stillness only broken by the melody of the birds, whilst welcoming the acorns, the honeysuckle, and the blackberries, I stumbled across Bombardier Glinn, got up in uniform and spurs, very intent on catching moths and butterflies

with his green net. Mrs. Glinn, a neat, natty woman, would be found sewing at her open window, peering occasionally between the fuchsia and the geranium, awaiting his return, anxious to communicate the important intelligence that baby had cut the first tooth. The tortoiseshell cat, with a red collar on, purrs consequentially; the tea-things are laid out; fresh and tempting are the shrimps and watercresses. Now you must look at the baby; healthy and wholesome, not a spot on his cool head, firm arms, splendid chest, and fat little legs. There he lays crowing and comfortable, to use the mother's language, "bless his little heart, as good as gold."

For an instant peep into another humble home, where a grey-headed barrack-sergeant, gradually recovering from severe illness, is in bed, with blue spectacles well down on his honest nose, contentedly reading the Bible. Everything about the cottage indicates frugal comfort. Notice on the table valuable medals; examine those handsome books—all prizes gained by the eldest boy. Happy is the father and proud the mother. "Happy as a king!" sighed George the Fourth, criticising the picture of the young ragamuffin swinging on a gate—a thousand times happier! Both these families were temperate people. Would to God we had more of them.

One loves to dwell on these pleasant pictures; but the pen reluctantly must revert to that hateful theme—the brutality, the misery, and the suffering inflicted on the innocent through the inability to draw the line of moderation in the indulgence, or the inclination, for alcoholic stimulants. One's blood boils to record that women far advanced in pregnancy, or just recovering from a bed of sickness, have been, and daily continue to be, starved, kicked, and cruelly used by drunken husbands. Quite recently, a patient suffering from heart disease reluctantly confessed that she had been repeatedly struck and kicked on the chest. Besides, too many instances of ailments date their origin to the clenched fist or the hobnailed boot. Poor souls! to the very last the victims thus throw the shield of apology over these cowardly ruffians—"My husband is a very good man until he gets a drop of drink." Yes, until he falls, the wretched sot is frequently also the cleverest workman, the most intelligent soldier.

Irresistible curiosity impelled me to attend at the police-court to judge of the appearance of a woman of thirty-nine who could so infatuate a man over forty with £5,000 a year. A clear complexion, a fine eye, a portly figure dressed in a sealskin jacket and black silk, her brown hair neatly braided, did not realise the idea of the verdict of the law—a drunken murderess; nor her soft musical voice, as she read a pathetic defence, pleading—oh, so piteously!—how dearly she loved him.

Every one thinks he can be moderate in his cups, and never wander from the paths of virtue. Now a convict in penal servitude, who can fully estimate the bitterness of her reflections in the prison cell at night?

There is no occasion to quote startling statistics proving that shattered health, squandered fortunes, and ruined families are constantly traced to one source—drink, which, indulged in excess, will lead its votaries to the workhouse, the lunatic asylum, the hospital, or the prison. As the daily witness of heartbreaking domestic misery, let a medical man implore mothers, specially soldiers' wives, to bring up their children water-drinkers; for one good habit leads to another, and *vice versa*.

Finally, in all your troubles and trials here, training up your children to the best of your endeavours in the right path, never forget there is a land within your reach "where there shall be neither sorrow nor crying, neither shall there be any more pain, and God shall wipe away all tears from your eyes."



## THE AMOUNT OF DISEASE AND DEATH CAUSED BY ALCOHOL.

At the present time it is not possible to get reliable statistics of the amount of disease and death caused by alcohol. There is a general belief that many persons injure their health and shorten their lives by drinking; but none of us have clear ideas as to the number who suffer and die prematurely through intemperance. The reports of the Registrar-General, valuable as they are, do not supply us with the required data, owing to the way in which the deaths are registered. In order that statistics of disease and death may be made available for practical application, a generally recognised nomenclature of diseases is necessary. The Royal College of Physicians, seeing the necessity for such a work, appointed a joint committee of physicians and surgeons for the purpose of making a generally recognised "Nomenclature of Diseases," and in 1869 it was published. The work consists of more than three hundred pages, and gives the names of the diseases in Latin, French, German, Italian, and English. A copy of it has been sent to every registered medical man in the kingdom. It is a work of considerable labour, and likely to prove useful; but on the subject of diseases of alcoholic origin we

regard it as unsatisfactory. Alcohol is not altogether forgotten, for it is included in the list of vegetable poisons. The only disease named in connection with it is delirium tremens, so that however many diseases or deaths may be caused by alcohol, none will be registered as caused by it except cases of delirium tremens and cases of poisoning. The consequence of this is, that one of the greatest causes of preventible disease and death is not shown to be so fearful an agent of mischief as it undoubtedly is. Of course it is altogether impossible to estimate the full amount of suffering and death caused by alcohol. Under no nomenclature of diseases, or system of registration, could we register the diseases and death produced by its indirect influence. Cases, for instance, where health is injured and life destroyed through persons, who waste their money in strong drink, being compelled to live in unhealthy homes, or to go without proper food and clothing; or cases of wives and children sent to untimely graves by semi-starvation, caused by the intemperate habits of husbands and fathers—these, and many more, could not readily be placed to the account of alcohol. But all the disease that is unquestionably of alcoholic origin ought to be registered as such. There would be some difficulty in doing this even if the “Nomenclature of Diseases,” issued by the Royal College of Physicians, furnished the necessary terms. It would be a great shock to the feelings of respectable people to find that so many of their relatives die from diseases caused by the use of strong drink. And it would put the moral courage of medical men to the test if they had in every case to certify the real cause of death. But correct statistics are of immense value, for, as is stated in the Preface to the “Nomenclature of Diseases,” they “tend to throw light upon the causes of disease, many of which causes, when duly recognised, may be capable of prevention, removal, or diminution.” It is, then, to be regretted that, according to present arrangements, the reports of the Registrar-General will give us only a limited account of the doings of alcohol; but as the “Nomenclature of Diseases” is subject to decennial revision, perhaps the next edition may supply the means for fully registering the disease and death caused by alcohol.

The proceedings at coroners' inquests sometimes throw a little light on the dark deeds of alcohol; but whether it is owing to the places where inquests are generally held, to the prejudices of the juries, or the want of medical knowledge on the part of the coroners, many of the verdicts are of a very unsatisfactory character. The *Lancet* of the 7th October called attention to the subject as follows:—

“The medical statistics of England and Wales show that 25,376 inquests were held by coroners during the year 1870, which resulted in the following

verdicts:—Murder, manslaughter, and justifiable homicide, 442; suicide, 1,562; found dead, 2,857; accidental death, 10,906; injuries from causes unknown, 175. In addition to these, we find a group of verdicts classed under the head of ‘natural death’: from excessive drinking, 316; disease aggravated by neglect, 128; want, cold, exposure, &c., 320; other causes, 8,895. No doubt these 9,659 persons died a ‘natural death,’ in so far as it is natural for people to die when their vital power is sapped, wasted, or destroyed; but it is a very fine distinction to draw between the man who commits suicide by any of the customary brief methods, and he who deliberately puts an enemy into his mouth to steal away his brains first and his life afterwards. Again, it is natural enough that an old man or woman, or a young child, should die if exposed to want and cold; but it is most unnatural that such cases should ever arise in a country boasting itself to be Christian. The nomenclature of verdicts stands in need of revision.”

Can any one acquainted with the habits of the people believe that only 316, out of 25,376 cases of death in which inquests were held, were caused by alcohol? As we have no reports of the evidence, we have no positive proof of the proportion of those deaths which were produced by drinking; but, from what we know of the cases brought before coroners’ courts, we are compelled to think that the great majority were deaths by alcohol. The *Lancet* justly remarks that it is “a very fine distinction to draw between the man who commits suicide by any of the customary methods, and he who deliberately puts an enemy into his mouth to steal away his brains first and his life afterwards.”

There are, however, some points of difference in the means, if not in the end. In both cases, the end may be death; but, in the ordinary suicide, there is intention to commit the crime: in the case of the man who kills himself with drink, there is not a pre-determination to commit suicide, but only a resolution to drink. And, though the drink may be as poisonous and as fatal to life as any other poison, there is this in its favour, that popular opinion sanctions its use. The man who kills himself with drink conforms to the customs of society by taking popular beverages; the ordinary suicide does not adopt a method of destruction sanctioned by fashion. In both cases, the means are really evil and ultimately fatal. The men who are now slowly, yet surely, killing themselves with alcohol are objects of commiseration. They are the victims of erroneous ideas and evil habits; they believe strong drink to be good; they had seen their fathers and mothers, and their elders and superiors, drink liquors containing alcohol, and they had followed their example. The drink has created in them an unconquerable appetite. Day by day this appetite grows stronger, the understanding and the will weaker; and they are hurried on, as it were, by an irresistible impulse, to destruction. In the case, too, of ordinary suicides, many of them have really originated in the use of alcoholic drinks, the alcohol of which has so deranged the nervous centres as to banish hope and destroy

self-control. Little do men think of the danger connected with substances which can poison the brain and subvert the intellectual faculties. They think that they are strong, able to guide themselves, and can distinguish the use from the abuse; they know not their own weakness and the strength of the drink, but put "an enemy into their mouths to steal away their brains." If the verdicts in coroners' courts were what they ought to be, they might serve as a warning to all of us of the danger connected with the use of alcoholic drinks. It seems very strange to classify deaths from "excessive drinking" under the head of "natural deaths." It would really be more reasonable to call them artificial deaths. The drinks which lead those who use them on to excessive drinking are not natural productions. Man manufactures them by his skill and labour, and they are not really necessary to supply any of the natural wants of the body; how then can deaths caused by the use of these drinks be with any propriety called "natural"? There may be some difference of opinion as to what is natural death; but certainly death caused by the introduction of an excessive quantity of a poisonous drink into the human body is not a natural death; neither is death natural when it is caused in any way by the ignorance or wickedness of men. If this idea be correct, a great many deaths which are never made the subject of investigation by coroners are not natural deaths; and when we get a system of registration of deaths, which will give us correct statistics as to the cause of death, we shall find one of the chief causes of unnatural death to be the use of alcoholic liquors.



## Miscellaneous Communications.



### MEDICAL TEMPERANCE MEETING IN EXETER HALL.

An important meeting, convened by the National Temperance League, was held on Tuesday evening, 31st October, in Exeter Hall, which was densely crowded in every part by an attentive and deeply-interested audience. The chair was taken by Mr. JOHN TAYLOR, who said—I feel sure that there will be but one feeling in this meeting, and that is of gratitude to the gentlemen

who have accepted the invitation of the committee of the National Temperance League, and are here present this evening to address you upon that most important feature of the temperance cause, the medical aspect of it. These gentlemen have many of them travelled up long distances, leaving their many occupations and pressing engagements, and have come to take a

public position in the cause—a position which requires no little courage, and demands some self-sacrifice in upholding it. And therefore I think it would be a very small thing to ask for them a patient hearing. They are entitled to our most attentive consideration and thankfulness for being present this evening.

Dr. B. COLLENETTE, of Guernsey, was the first speaker. After a few introductory remarks, he said—Some thirty-five years ago I studied medicine and surgery in this great metropolis, and in that queen of cities, Paris. I settled down to the practice of my profession in my native isle, Guernsey. At that time, sir, I had done what many thousands have done since, and still do—I had pinned my faith blindly to the sleeves of my teachers, and entered upon the practice of my profession with the full conviction that alcoholic liquors were necessary as an article of diet, and essential as a medicine, and for the first years of my professional life I followed the old well-beaten track, and prescribed without any stint brandy, rum, gin, wine, and beer, and, sir, I have never ceased to regret having done so—(cheers)—for I cannot forget—I wish I could—that one person at least, in following the advice I gave him (he was a Methodist class-leader, in good repute), lost all self-control, all moral and religious feeling, and drank himself out of property, out of respectability, out of friends, out of the church, out of Christ, and out of the world, and for more than twenty years he has occupied a place in the most dishonoured of all places, a drunkard's grave. I have to thank God, however, that I was led early in my professional career to see the error I was committing—(cheers)—and I was led, sir, in this way. I had been about five years in practice, when a poor, illiterate, and not over-clean journeyman shoemaker called to consult me. After having prescribed for him, and advised him as to his diet, I finished by ordering wine. The man, in a very respectful and quiet manner, thanked me for my prescription, and thanked me for my advice, but said, “I cannot take wine.”

(Cheers.) “And why not?” “Oh, sir, I am a teetotaler!” “Well, and what has that to do with it? You require the wine to support and nourish you, and to give tone and strength to your system.” Looking at me, sir, and addressing me very respectfully and very quietly, he said, “Will you pardon me if I ask where this wine is to get its strength and its nourishment from?” (Cheers.) I confess to you, sir, that I have never in my life, either before or since, felt so small as I did at that moment. (Laughter.) There was a poor ignorant man putting a professional question to me which I could not answer. I had never thought on the subject, sir! Seeing my confusion and my hesitation, he again said, “Sir, pardon me if I make so bold as to offer to lend you a few tracts I have recently purchased.” (Cheers and laughter.) Well, sir, these tracts were sent to my house that day, and I read them carefully and attentively again and again; then I went to my bookshelves and took down every book in which I could find the words “spirit,” “wine,” or “beer” mentioned, and those I read carefully and attentively; then, sir, I purchased “Bacchus” and “Anti-Bacchus,” and I read those, and the result of my reading and thinking was that on the morning of the 9th of August, 1841, now more than thirty years since, I went to the secretary of the Total Abstinence Society, and signed the pledge, and from that moment to this I have conscientiously kept it. (Loud cheers.) Not only have I conscientiously kept it from that day to this, but from that hour not one single drop of intoxicating drink has passed my door or been seen on my table—(cheers)—for I am happy to say that my good wife a few days afterwards followed my example—(cheers),—and we have always thought that what was not good enough or fit for us was not good enough or fit for our friends and guests. (Cheers.) All our children—and we have had eleven of them—(laughter)—have been nursed and reared without one single drop of intoxicating drinks—(cheers),—and as far as I know, have never tasted them.

Some of them are married, and are now fathers and mothers, and I believe—nay, I am sure, that they will bring up their own children in the way (in this respect, at least) in which they themselves have been brought up. My father and mother, then seventy-six and seventy-four years of age, and who for more than fifty years had been in the habit of taking these drinks in moderation every day of their lives, signed the pledge at the same time. (Cheers.) If any of you ask if they were injured by taking the pledge at that age, I say emphatically, “No!” they were benefited by it. My father lived for fifteen years afterwards, my mother lived for seventeen years afterwards, both attaining the age of ninety-one—(cheers),—and both within a few days of their death were at my house, and were able to walk a mile from their own house—and did. (Cheers.) I bring this matter before you to show that an outspoken, plain, honest, but poor and ignorant, journeyman and not over-clean shoemaker, was instrumental in making three generations of one family teetotalers. (Cheers.) No one, however humble his sphere of life may be, is without opportunity of doing good, if he acts openly and honestly. Well, sir, day by day I became more and more convinced that intoxicating drinks were unnecessary in health—in fact, injurious, and I also became convinced that they were unnecessary as a medicine; and after much consideration, reading, and thought on the subject, I resolved that, let the cost be to myself what it would, from that day I would never order them if I could avoid it, but would banish the whole of them from my practice, and from that day to this, with some few exceptions, I have faithfully and conscientiously carried out that resolve. (Loud cheers.) And I am happy to tell you, sir, and this respectable and large audience, that I have never had cause to regret that resolve, as far as my patients are concerned—I don’t say as far as myself, for I should have stood very much higher as a medical man in my own island if I had ordered them. But still I have never

had cause to regret having done so; and, sir, in those thirty years I cannot have made less than from 250,000 to 300,000 medical and surgical visits. Many of these cases were cases of typhus and typhoid fever; a large number were cases of malignant scarlet and other fevers, in which it is the usual and recognised practice to administer largely of intoxicating drinks, such as wine and brandy; but, sir, I remember when a pupil, seeing in such cases as I am now alluding to this prescription—and, indeed, I may say daily prescription: Half-a-pint of brandy, a bottle-and-a-half of port wine—that misnamed article called “port wine”—and in addition to that, four or six ounces of yeast and ammonia, and other stimulants. I used then to wonder, sir, how it was that so many persons died under this treatment; but I have long ceased to wonder, and if I wonder at all on the subject, it is that any could recover under such barbarous treatment. (Cheers and laughter.) I pursued the same course, the same non-alcoholic treatment, in smallpox, in floodings, and in other exhaustive diseases, and with the best results. If I am to take your statistics on smallpox as being correct, then I unhesitatingly say that non-alcoholic treatment is infinitely superior to the alcoholic. (Cheers.) Your mortality from smallpox, if what we read be true, is simply frightful, and I have no doubt in my own mind that a large proportion of that mortality is owing to the stimulating and drugging by these drinks. (Cheers.) Sir, some few years ago, happening to be on the landing-stage of our pier, on the arrival of the steamer from Plymouth, a Cornish navvy was standing by my side, and I heard him hail a fellow-countryman, who was then on board the steamer, something in this way: “I say, Jack, this is a stunning place; a fellow can get gloriously drunk here for sixpence.” (Laughter.) This, sir, was true, and not only so, but the man would have been speaking the truth had he said that “a fellow” could get “gloriously drunk” for far less than sixpence. I am sorry to say that we

have a legion of publichouses in our place, at each one of which you can purchase two glasses of brandy, or what is sold as such, for three halfpence. With the facilities for drinking and getting drunk, you will not be surprised to hear that we have large numbers of delirium tremens cases. Well, sir, I do not know that the treatment of delirium tremens at the present day is so bad as it was when I was a pupil, and first commenced, but I know that the general prescription is brandy, brandy, brandy—brandy and eggs, brandy and beef-tea, brandy and milk, brandy and ammonia, opium and brandy. Now, sir, I have treated delirium tremens for more than thirty years—and I have had some hundreds of cases—and I have treated every one of them without a single drop of intoxicating drinks, and with the best results. I have scarcely lost a case of delirium tremens, but for thirty years not one has had a thimbleful of intoxicating drink. (Loud cheers.) I am not aware, sir, whether this large audience know that total abstainers, as a class, are very much more exempt from disease than other classes of individuals. (Hear, hear.) Sir, this is a fact, an indisputable truth, which one could easily bring thousands of cases to prove, if it were needful, or if the time would permit; but allow me just to refer to one or two cases in point. That fell and dread disease, cholera, the name alone of which alarms the world, is a case in point. In Guernsey we have had two severe epidemics of cholera, the first in 1832. At that time there were no teetotal societies, and, as far as I know, no practical abstainers, in Guernsey; but I remember hearing the gentleman whose pupil I then was, saying that it struck him as very singular and strange that the *cholera morbus*, as we then called it, chose for its victims chiefly the drunkard, the debauched, the feeble, and the frightened. Well, sir, our second visitation was in 1849. I then had been in practice some thirteen years, and was appointed one of the physicians of the then cholera hospital, and I can bear my own testimony to the truth of the remark.

But what I want to bring before you principally is this: that in that visitation of cholera in 1849, a very large proportion of the then drunkards of Guernsey were swept away. Many respectable and moderate drinkers likewise became its victims; but the teetotalers to a man were spared. (Cheers.) Not one single teetotaler in Guernsey died of cholera, and only two were attacked by the disease in a mild form. Then, sir, take gout, and rheumatic gout. I don't know how it is in London, or England generally, but I know that in Guernsey, in thirty years' practice, I have seen but one single teetotaler have either gout or rheumatic gout. (Cheers.) Take, again, convulsions in children. I don't know how it is with you, but with me, in thirty years I have seldom seen—in fact, I cannot recollect seeing, although I have been trying to do so—a case of convulsions in children whose parents had been teetotalers some few years. (Cheers.) And then, sir, in operations. In thirty years I have had to perform many operations, because in Guernsey we act the surgeon as well as the physician, and during those thirty years I have never, except in two cases, prescribed or let my patients have one single drop of intoxicating drinks; and these two cases to which I allude were exceptionally treated in consequence of consultations, against my wish, against my own convictions, and against my own conscience. Both these cases terminated fatally, and are the only two cases that I ever lost after operation. (Cheers.) In an address limited to twenty minutes it is impossible for me to enter into anything like details; but I must be allowed just to mention one case, in a few words, because it occurred at the very earliest part of my temperance career, and confirmed me in my determination to persevere. Some thirty years ago I was called to attend a man suffering from a very large suppurative ulcer of the leg. This man had been under very skilful care for eighteen months, but had gradually got worse and worse, and it became a question of amputation. Naturally I inquired as to the man's

habits and treatment, and I quite concurred in every part of the treatment, excepting that the man was ordered to drink largely of wine and spirits; and according to his own statement, in eighteen months he had drunk one hundred and ninety gallons of strong beer. That is a fact. (Laughter.) Well, sir, concurring with the treatment, with that one exception, I requested the man to abstain entirely, and at once, from everything of an intoxicating nature. The man followed my advice, and was called a fool for his pains, and I was called a madman for advising him. Well, a week transpired and no change occurred; at the termination of a fortnight there was a very marked improvement in the ulcer, and in four months the man was perfectly cured and sent to his business. (Cheers.) Well, sir, I think I have a right, after dealing with such cases, to say that the non-alcoholic treatment of disease is a good one and a safe one, and I think you will all agree with me that it is so when I tell you that I have tried this system upon every class and division of men. I have tried it, sir, upon the rich and the poor, upon the old and the young; I have tried it upon the overworked and upon the idler, upon the overfed and the half-starved, upon the moral and the grossly immoral; I have tried it upon the drunkard himself as well as upon the sober man, upon the dwellers in well-ventilated and well-drained houses as upon the poor wretches huddled together in miserable hovels without drainage or ventilation of any kind; I have tried it, sir, upon paupers of a large and populous parish for twenty years; I have also tried it upon the inmates of a good-sized hospital for the last fifteen years; and yet, with the two or three exceptions I have mentioned, I have never found it needful to depart from my rule. (Cheers.) My time has nearly expired, but, with your permission, I wish to make just one observation more. I wish to call your attention to one point, which I think will claim the attention of the rate-payers present. I tell you as a fact that the non-alcoholic treatment of

disease is not only infinitely superior to the alcoholic, but it is infinitely cheaper. (Cheers.) In 1844—that is, three years after I became a teetotaler—there was a vacancy in our hospital, and I offered myself for the office. Well, sir, I was almost unanimously rejected. (Laughter.) It was said that I should very likely seriously injure the patients entrusted to my charge. Well, in 1844 £230 was spent in the hospital and the adjoining poorhouse for intoxicating drinks, the average number of inmates being 191. Ten years afterwards, I again offered myself, and this time was unanimously accepted. (Cheers and laughter.) In 1854, then, I was appointed physician to the hospital: in that year, sir, instead of spending £230 for intoxicating drinks, there was spent £10. (Cheers.) Now, sir, I am not going to take the credit to myself for making the whole of that very great reduction from £230 to £10, for on looking over the hospital papers, I find that the directors had already “put the screw on,” and in the preceding year (1853) had reduced the expenditure down to £76. But what I want to do is to contrast and compare the fifteen years immediately preceding my treatment with the fifteen years subsequent. From 1839 to 1853, both years included, in that small establishment, £2,026 were spent for intoxicating drinks, or an average of £135 a year, with an average of thirty-one deaths. In the fifteen years commencing with the year 1854, there was spent only £212, instead of £2,026, or an average of £14 a year, instead of £135, and with an average of only twenty-three deaths instead of thirty-one. (Cheers.) Now, don't run away with the idea, ladies and gentlemen, that this is a teetotal hospital; nothing of the kind. My colleagues and myself have a perfect right, if we shall think fit, to order any stimulant we please, and to any amount; for, sir, there is no board of directors under the sun that is more liberal and generous than is the board of directors in Guernsey; and if we chose to order fifty pounds' worth of drink it would be granted. Nor are my colleagues teetotalers, but to do

them justice, I must say that this £14 of which I have spoken likewise included the cost of the drink consumed at the tables of the governor and matron's houses, and also in the porter's lodge, so that you will see that the patients had very little indeed.—(Laughter and cheers.) Well, then, in conclusion, allow me as a medical man to give you a piece of advice. We generally charge for our advice—(laughter)—but to-night I will give it gratuitously. (Cheers.) If you value your happiness, if you value your health, if you value your lives, banish from your houses, banish from your tables, banish from your sick rooms every particle of intoxicating drinks—(loud cheers)—for be assured that they produce weakness, not strength; sickness, not health; death, not life. (Loud and prolonged cheering.)

Dr. R. L. BAYLEY, of Stourbridge, delivered a lengthened address, in course of which he said:—Viewing the all but universal extent of the drinking customs of society, and considering how intimately are these practices mixed up with social life, the problem of the physical effects of alcohol, with the ulterior consequences thereof—mental, moral, physical—is, to my mind, one of the most important subjects that can occupy the attention of the physiologist, philanthropist, or pathologist,—important from the very extent of its use, but still more so from the streams of continuous mental, moral, and physical deterioration which result from practices which are founded upon popular delusions, and which will not for a day bear the searching investigation of modern science. Alcoholic drinking has a false foundation, resting upon popular delusion. It is perfectly incompatible with advanced chemical and physiological knowledge; and I affirm with all truth that this question of alcohol, as regards its effects upon the healthy body, is one of the most, if not the most, neglected subjects of social science! During the past ten or fifteen years medicine has made rapid strides, and is fast becoming one of the exact sciences, and perhaps shortly will achieve all that philoso-

phers have ever hoped for it, and yet has the alcohol question, one of vital importance, been professionally uncared for—it has not kept pace with other improvements in medicine. Alcohol is without a precedent amongst drugs for abuse, and without a precedent, too, for the small amount of attention paid to it. Yet, were the degree of attention to it commensurate with its importance to mankind, it would occupy the very first place amongst physiological teaching. The question of alcohol is essentially a medical one, and it behoves us in a moral as well as in a physical sense to seriously weigh our responsibility in this matter, to further investigate the question, to make a special study of alcohol, and to ascertain whether the allegations made against it have not a solid and unchanging foundation in truth.

Dr. J. W. BEAUMONT, of Sheffield, read a paper, in which he discussed the following propositions: 1. Alcohol is not a natural product, and therefore cannot be said to be given to mankind by God the Creator; 2. It is not essential to health; 3. Its action is to produce an abnormal state of the fluids and solids of the healthy body; 4. It is not necessary in the general treatment of disease, but is calculated to intensify it; 5. It is attended with great moral danger, and is apt to lead to depravity, vice, degradation, and ruin. In illustrating the second proposition, Dr. Beaumont said: "The strongest and healthiest portions of mankind never take alcoholic drinks at all. The teeming millions who hold the doctrines of Mahomet are bound by their religion to eschew alcoholic drinks altogether: and are not they among the healthiest of the human race? Men who are undergoing training for athletic efforts find themselves under an absolute necessity, either to abandon alcoholic liquors, or at least to reduce their participation of them to the lowest minimum. Men who have taken these beverages even in strict moderation have been known to declare that they never knew what perfect health was until they discontinued them alto-

gether. It is well attested that mental exertion can be better sustained, and bodily fatigue be better endured, without such aids. It can be clearly proved that perfect health can be enjoyed without them, and that their use is incompatible with it. Where alcoholic liquors have been introduced into communities in a primitive state, and in the simple enjoyment of the unintoxicating beverages provided by the bountiful hand of the Great Giver of only good, results have followed such as alcohol can alone bring about, results subversive of peace and destructive to health. In this way alcoholic liquors are now deteriorating some of the finest races of mankind, and sweeping off whole nations of aborigines with a fatal extinction." Under his fourth head Dr. Beaumont remarked that, "Sickness is always made the plea for taking alcoholic drinks, and granting that there may be a rare case in which the temporary use of such stimulants may be called for, and this as an exception I am willing to admit; yet, in the greater bulk of cases occurring in ordinary practice, our patients would be better without them than with them. In all cases where febrile and inflammatory symptoms or other active diseases exist, alcoholic stimulants seem to me to be plainly contra-indicated and to be positively injurious, inasmuch as their employment aggravates the disease which we are endeavouring to cure, and only adds fuel to the flame. When the body has been excited with febrile and inflammatory action greatly in excess of the natural rate, is it not better to depend for the repair of the system on gradually-administered and nutritious aliment, with perfect rest of mind as well as of body? After very careful observation, I am satisfied beyond a doubt that restoration to health is more thorough and complete where alcoholics are withheld, than in those cases where they are given. In fevers of different kinds alcoholic drinks have been all but universally employed, and are considered to be pre-eminently serviceable in such cases; but my experience has proved them to be as objectionable here as in any

other class of complaints. Cases of fever seem to recover more satisfactorily and more rapidly where they are not made use of. But my observations have not been limited either to one class of cases or another, but have taken in the whole range of practice. For a period extending over several years, I pursued my inquiry into the practical value of alcohol as a remedial and therapeutic agent, and made observations and experiments on nearly 3,000 cases. In all these cases, comprising all the representatives of public and private practice, I have reason to believe that I had the truthful co-operation of my patients, and that no alcoholics were drunk clandestinely. Having pushed my investigations to this extent, and taking these 3,000 cases consecutively from almost all conditions of society, and, more especially by far, from among patients belonging to our public charitable organisations, whose ordinary poverty would make them more likely to need alcoholic stimulants when attacked with sickness, I have come to the conclusion that the value of alcoholic liquors has been vastly exaggerated, and that the treatment of disease in no way of necessity requires them. I have found, further, that the medicines administered are more efficacious where wine and such things are withheld, than in those cases where they are allowed as a part of the treatment, and that alcohol, instead of facilitating recovery, is a hindrance to it. This, be it remarked, is not a mere opinion, but the result of fair and patient trial."

Mr. B. TOWNSON, M.R.C.S., of Liverpool, said: When I passed the College of Surgeons in this great city, I promised to uphold its dignity; and I feel that I never occupied a position in which I could do more to uphold its dignity than I am doing on this platform. I live in a town which is said to be the black spot of the Mersey; I live in a town which is said to be the most unhealthy of any town in the kingdom; I live in a town where there are 2,600 spirit vaults and publichouses, and 500 bakers' shops. Would you not believe if you entered

such a town and saw such a large number of publichouses, that the spirit-vaults dealt out a necessity of life? But that is all a mistake. As the result of my professional observation, and my professional examination, of cases of all kinds which have come before my notice, I believe that if this moment every drop of spirits you drink in this kingdom, whatever its name, was banished from our midst, not only should we not lose a single life but we should save an immense number. You will be disposed to say, Who is this man who makes such a bold assertion? I will tell you that I have been a total abstainer from twenty to thirty years; and that I have never in my married life put a single drop of alcoholic liquors upon my table. I have not to say what one of the gentlemen has said to-night—that there is, perhaps, an amount of odium attached to the total abstainer. I tell you that in the midst of Liverpool I go about my medical practice, having every day and every hour of my life to rejoice that I am a total abstainer. And mark you, instead of receiving opprobrium I receive encouragement from those I attend. The spirit-dealer sends for me; and why does he send for me? Because he believes I am a careful doctor. Well, I am, I trust, a careful doctor; and I will tell you this, my friends, that I do not consider the responsibility of a medical practitioner ends when he has written his prescriptions on paper; he himself must be a living prescription every day of his life. I have the honour of being the medical officer to the Post-office at Liverpool, and have held that appointment for upwards of fifteen years. Every man who goes into that service has to pass my examination, and I invariably find, where a man is a total abstainer (and I rejoice to see that many are), that his circulation is quieter than that of men who drink alcoholic liquors. We have also a number of telegraph boys entering the service, of whom I have the examination, and I find that those boys who are the children of abstaining parents have the healthiest flush upon their faces. I make a point of questioning

them whenever these boys come before me. I say, "Well, my boy, what do you have for breakfast?" The general answer is tea or coffee, and bread and butter. I say to him, "You must tell your parents that you must have porridge." I say, "If you have oatmeal and milk, and bread and butter, you have all the elements essential for making a strong boy and a muscular man, but you have not in tea. It is a matter of little consequence if you are put off two or three hours from getting your dinner, if you have a good mess of porridge." And I further tell them that it is that upon which I grew up, and that I have spent all my life in Liverpool, and have been in the midst of all the epidemics there, and, through the protecting care of my Heavenly Father, I have never had an attack. Now, further, it has been my privilege to attend for twenty-two years 600 of our police officers—the whole of the north division of police, and I can tell you with the most perfect truthfulness, that amongst those men there is a considerable number of total abstainers, and during the whole of the twenty-two years some of these abstainers have never required my care. And, further, such is my opinion of total abstinence, that, if I had a large amount of money to stake, and was offered a large premium upon a man who took alcoholic beverages what is termed moderately, and upon one who took none at all, I should infinitely prefer the one who took none, because I know very well that the abstainer is most likely to live the longest. Now I wish to speak to you particularly about a certain class of persons, and that is the class of nurses. In Liverpool I know a number of nurses who are total abstainers, and there are no women who bear their work so well and patiently, who keep up the vigour of their bodies, and who require so little sleep, as these totally abstaining nurses. And further, I have a strong impression, and am perfectly sure it is true, that there is no class of persons with so much power given them to resist the influence of infectious disease of all kinds. I will tell you another thing

which I have remarked in my practice—excuse my mentioning it. You know very well that in this, our England, there is a large number of the old *coachies*, a class of men we respect very much; and I have noticed that they nearly all suffer from most dreadfully ulcerated legs; but I never saw a case in a total abstainer. Let me tell you another fact, a most powerful one: I never yet saw a case of the gangrene of old age except in those who indulged freely in spirituous potations. This disease is a positive softening of the textures of the extreme parts of the body, and the death of those parts. I am very glad to see that in every part of the country we are much progressing. I have been asked—Is there not a larger amount of consumption amongst total abstainers and their children than amongst moderate drinkers? I believe it is quite the contrary. And then I have been asked—Are not rickets very frequent in the children of total abstainers? I am bound to say this—that there is no class of children that have straighter legs than the children of total abstainers. (Hear, hear.) Now I do want to tell you one little fact—I have observed that the little children of the total abstainers, as a rule, cry least. (Laughter.) But it is thoroughly accounted for. I am perfectly sure that the natural supply of the totally abstaining mother is less liable to produce distress and pain to the little infant, from being less acid, than is the case with the mother who takes alcoholic liquors. Do not suppose that I come here to London to tell you that every man is injured by his glass of beer. I am not going to tell you that. But I am going to tell you this—that total abstinence is consistent with the very highest state of health, with the strongest physical vigour, as shown by men who earn their living upon the sea; as shown by men who earn their living in the army; as shown by the men who labour in our streets day by day, and who day by day get soaked to the very skin with rain, and that there is no class of persons amongst all these who enjoy such an excel-

lent state of health as the total abstainer.

Mr. L. M. BENNETT, M.R.C.S., of Winterton, Lincolnshire, said: The few minutes allotted to me I shall devote to giving you my personal and professional experience for forty years. My first attention to the temperance cause was in consequence of seeing a paragraph in the paper stating that seven men at Preston had resolved to form a temperance society, and to abstain for ever from intoxicating drinks. At that time it was totally unknown whether Englishmen could do without them or not. It was a grand experiment, for I don't know that there were many persons in England who at that time did abstain from these drinks. I from that moment resolved to try the experiment myself, and after five years' trial I came to this resolution, and although I have been engaged now for forty years in the practice of a profession requiring considerable activity and exertion, yet during the thirty-seven years I have abstained from intoxicating drinks, I candidly say that I have been able to perform the duties of that profession with greater facility than I did when I took any very moderate quantity of them. For thirty-seven years not one drop of intoxicating drink has entered my system—and for thirty-seven years I have not used one single drop of alcohol as a medicine; and, from all my observations and experience, I think I have come to this conclusion, that intoxicating drinks in any quantity, however small, are unnecessary to maintain, or preserve health or life; that they are neither necessary nor desirable to support the system under exhaustion, nor to recruit it when exhausted, and that they may be suddenly or gradually abstained from without any fear of injury to health. Four years ago, in the town in which I reside, which contains only 1,800 inhabitants, I was called upon to see 500 cases of typhoid fever. Every one of those 500 cases was treated without one drop of alcohol. And now the question is, did I lose more patients out of that 500 than I should have done had

they been treated with alcohol? The statistics of the deaths by typhoid fever amount to from sixteen to twenty-five per hundred. I lost during that year 4 per cent.; and therefore that fact is established that fever, typhoid fever, one of the worst fevers we have to treat, may be treated, and treated successfully, without the use of intoxicating drinks. I then come to inflammations—and it has been of late years the practice of many to use (more particularly during the active treatment of such cases) brandy and wine, as well as during convalescence. My practice during thirty-five years has been to do without it, and my success has been very great. The mortality has, in these cases of inflammation, been considerably below the average. Then, I may just remark respecting midwifery cases, that during my thirty-seven years' practice I have attended upwards of 3,000 cases. In these 3,000 cases I have had some very bad cases of flooding; and as they have all been treated without intoxicating drinks, I have the pleasure of informing you—and I say it here as I would say it to the whole world—that during the whole of my practice I never lost a single case from that cause. Dr. Garnett, a physician practising in London upwards of a hundred years ago, says that he never knew an instance of a teetotaler, or a person who abstained from intoxicating drinks, ever having the gout, and he never knew a person who had the gout who abstained for two years who ever had it afterwards. The result of my thirty-seven years' practice is the same. I have never yet met with a single person who had abstained from intoxicating drinks for two years that ever had the gout, and I never met with a person who had the gout who would abstain from intoxicating drinks for two years but was always cured. There is one class of disease which is treated by the medical profession generally with large quantities of wine and brandy. I allude to carbuncle—a very dangerous disease, from which a great number of patients die. I have had a great number of cases of carbuncle in my

practice, and I have treated them all, without exception, without one particle of intoxicating drinks. I never lost a patient from carbuncle in my life. I could allude to many other diseases in which the use by medical men of alcohol is to be deprecated, but I say it, without fear of successful contradiction, that I believe there is no curable disease but what may be cured better without alcohol than with it, and I also say this, that there are many diseases which exist which, were it not for alcohol, would not exist at all. For instance, who ever heard of any one having delirium tremens without taking intoxicating drinks? Now, the practice in delirium tremens of a great number of medical men is to give a certain quantity of stimulants, and they say that this is absolutely necessary, or the patient will sink and die. The fact is, the disease is caused by alcohol, but alcohol will never cure it. I have treated a great number of cases of delirium tremens without alcohol, and I have been very successful. They have nearly all got well. Then with stomach complaints. The greatest difficulty you have in the treatment of stomach complaints is that people take wine, brandy, and spirits all their lives, and never get cured of such complaints; but I have very little difficulty indeed in curing stomach complaints, if people will only give that organ a fair chance—give it rest and abstain from intoxicating drinks. Another class of disease I would mention—disease of the liver. Now, my experience is that few indeed, if any, persons who abstain from intoxicating drinks ever have disease of the liver at all. Generally speaking, those persons whom I have examined after death who have been abstainers, I have almost invariably found to have healthy livers. These are a few, and a very few, of the diseases in which intoxicating drinks are generally given. As far as I am concerned, I have had all kinds of diseases to treat, and all kinds of patients, and I have a large and extensive union containing a great number of the poor, and I find the same treatment answer with them as with

the rich ; but I must confess that it requires a good deal of moral courage in a medical man to turn a total abstainer. During the last thirty years my only drink has been cold water. I neither take any intoxicating drinks, tea, coffee, milk, nor anything else but cold water. I have on an average had to travel forty miles a day. I have frequently been from twelve to sixteen hours a day in my gig, exposed to heat and cold, and have been called up frequently once, twice, or thrice in the week to a distance of twelve miles there and the same back. I have done this during summer and winter, in the coldest weather and indeed in all seasons of the year, my only drink being cold water, and if

any man can do that without intoxicating drinks, I think those who are not exposed to such great and trying circumstances can do without them also.

Dr. JAMES EDMUNDS gave an interesting narrative of his well-known personal and professional experience in relation to this subject. He said his general conclusions were these :— That if you want to maintain your health you should abstain from alcoholic liquor ; that every particle of alcoholic liquor you take into your system is as much a poison as is a particle of arsenic ; and that those who abstain will not only be exempt from disease, but will increase their longevity in a very remarkable degree.



#### MEDICAL DECLARATION RESPECTING ALCOHOL.

As it is believed that the inconsiderate prescription of large quantities of alcoholic liquids by Medical Men for their patients has given rise, in many instances, to the formation of intemperate habits, the UNDERSIGNED, while unable to abandon the use of Alcohol in the treatment of certain cases of disease, are yet of opinion that no Medical Practitioner should prescribe it without a sense of grave responsibility. They believe that Alcohol, in whatever form, should be prescribed with as much care as any powerful drug, and that the directions for its use should be so framed as not to be interpreted as a sanction for excess, or necessarily for the continuance of its use when the occasion is past.

They are also of opinion that many people immensely exaggerate the value of Alcohol as an article of diet, and since no class of men see so much of its ill effects, and possess such power to restrain its abuse, as members of their own profession, they hold that every Medical Practitioner is bound to exert his utmost influence to inculcate habits of great moderation in the use of Alcoholic liquids.

Being also firmly convinced that the great amount of drinking of Alcoholic liquors among the working classes of this country is one of the greatest evils of the day, destroying—more than anything else—the health, happiness, and welfare of those classes, and neutralising, to a large extent, the great industrial prosperity which Providence has placed within the reach of this nation, the UNDERSIGNED would gladly support any wise legislation which would tend to restrict, within proper limits, the use of Alcoholic beverages, and gradually introduce habits of Temperance.

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## HABITUAL DRUNKARDS AT THE ANTIPODES.

THE Inspector of Asylums in Victoria, in his report for the year 1870, presented to the Australian Houses of Parliament, touches upon the retention in lunatic asylums of both habitual inebriates and of those suffering under temporary insanity from drink.

"The experiment of placing inveterate drinkers under care in asylums was authorised by the (Colonial) Lunacy Statute of 1867, and has since been in process of trial. The 17th section of the Act may be briefly said to give power to the Master in Lunacy to commit inebriates to an asylum for any period up to twelve months, either on a written application from the inebriate himself declaring his willingness to submit to treatment, or on the application of a relative or friend, confirmed by sufficient proof that he is either labouring under, or recovering from, an attack of delirium tremens, had wasted his means by excessive drinking, had neglected to support his family, or threatened or used violence towards any of its members; provided that under both forms of application the payment of maintenance is secured. The first of these methods is voluntary, though with a difference. The application expresses the desire at the time of the person who makes it; but so soon as force has been given to it by the issue of the order, the patient can be kept even against his will, and can be captured if he escape from the asylum. He binds himself in effect to his own detention for a certain period, although in the interval his desire to enter or stay in the asylum may have become displaced by a vehement wish to leave it. The order, unless rescinded by a judge of the Supreme Court, is a sufficient authority for his detention. The second method is entirely compulsory, with the same proviso in regard to appeal.

"These powers have been so far made use of in a small number of

cases. The method of voluntary admission has been employed only once. A person subject to nervousness and melancholy, attributed by him to excessive use of stimulants, was committed on his own application for a period of six weeks. It was somewhat doubtful whether the patient was an inebriate, or whether this was not one of many self-accusing delusions. He was discharged much improved in mental and bodily health. A few cases of both sexes have been sent in for lengthened periods, under the compulsory clauses, on the application of relatives and friends, who provided the maintenance. They became perfectly sane and sober in a few days, and strongly resented their continued confinement amidst the insane as harsh and cruel—more cruel than a short term of imprisonment with enforced labour. Under these circumstances most of them would not engage in any sort of useful employment, and could not be made to do so in a hospital for the insane. Any medical treatment or reformatory tendency was nullified by the depressing influence of an unemployed sojourn in a lunatic asylum. There was a constant temptation to devise stratagems for obtaining drink, and make use of any freedom that was enjoyed to carry them into execution. They could not be trusted with the same amount of liberty as the really insane, on whom they exerted a hurtful influence. There was considerable truth in their protest. The power of self-control is not strengthened by such a residence without active duties and active responsibilities. So far the results are very decidedly against the committal of inebriates by a compulsory process to a public lunatic asylum."

As regards those labouring under delirium tremens and temporary insanity from drink, Mr. Paley holds that the common practice of sending them to lunatic asylums is to be deprecated on every ground. More-

over, he states that "what is elsewhere the exception is in danger of becoming in Victoria the rule; and in many instances the lunatic asylum is most improperly made use of as a free and pleasant refuge in which to recruit after a debauch."

The concluding remarks upon this subject are very much to the point, and, at a time when the treatment of so-called dipsomaniacs is attracting attention, may be reproduced with advantage:—

"In handling this subject the word 'dipsomania' has been hitherto avoided. That there is such a disease admits of no doubt; for though it may often be hard to separate the malady from the vice, its typical features are distinct. A man born with a transmitted disposition, if not to insanity, at least to nervous disorders, has sudden and uncontrollable paroxysms of drinking, separated often by intervals during which he looks back on his fall with horror and remorse. He will do anything to ward off a renewed attack of the impulse. The craving is not the result of indulgence—not an acquired habit, as in the ordinary inebriate. With scarcely any rise and progress it comes on capriciously, sometimes in very early youth. Complete abstinence, aided by everything that can

strengthen the voluntary power of self-control, is the only remedy. But out of the number of cases admitted to the Melbourne Asylum, only two could be assigned to this form of mental disease. When the term is made of general application to inebriates the result is very mischievous. It is a cloak for plainer and more accurate words. Call a drunkard a dipsomaniac, and it seems at once to imply that he has some practical affinity with 'maniacs'; that he should be maintained at the public expense, though idle and unshamed; that he should be taught to look upon himself as the victim of an irresistible disease. So also there is a real disease—kleptomania; and any one whose position did not make the act of appropriation so entirely motiveless that it could be seen at once to be involuntary would run a risk of being treated as responsible. But it would be a perversion of the term to certify as coming under it all who had allowed themselves to fall into the habit of taking what did not belong to them. If a man is treated as incapable of controlling some propensity, he will take little trouble to control it. The growing practice of sending inebriates to the Victorian asylums appears to give no discouragement to the vice."—*Lancet*, Aug. 26.



## ALCOHOLIC STIMULANTS IN WORKHOUSES.

THE Committee appointed by the West Derby Guardians to inquire into the use of stimulants in the Workhouse of the Union have presented their Report, which is a very interesting document. After some preliminary observations the Committee say:—

"In the outset of our labours we felt the necessity of ascertaining how we stood on a comparison with other Unions, as to the quantity of stimulants consumed. To this we felt must be added the effects of a larger or smaller consumption in the different

Unions, as far as these also could be ascertained. The effect upon the rate of mortality was, of course, the main question, and we resolved, that whatever might be the issue, the cost per head for stimulants, and the death-rate should be placed side by side. In pursuance of these objects we directed that returns should be gathered from a few of the largest Unions in the United Kingdom. These returns we have carefully tabulated, and carried out, and would now respectfully present them for your consideration. We

had long and anxious deliberations before we could decide upon a basis of calculation that would apply to every Union so as to secure a fair and uniform result. First we found that the average daily population was unsatisfactory, from the fact that the inflow and outflow were so much more rapid in one Union than another. We might instance Marylebone and Lambeth. In the former we have the population changing but twice in the year, while in the latter it changes five and a half times. Neither could we depend on the total admissions alone, for then we should have left out, in some instances, one-third of the inmates actually relieved. We therefore took the average population to represent the number in the house at the commencement of each year, and added the total admissions, in order to arrive at the total number relieved. On this basis we have calculated both the cost per head and the death-rate, and the result is seen in the two last columns of the tabulated returns.

"That our own Union should occupy so unfavourable a position must be a matter for regret to all concerned. We would gladly have been spared the pain and humiliation of adding the last line, but we are impelled to it by the consideration that while the smallpox has greatly abated during the last three months, our accounts for stimulants at Mill Road actually show an increase; for, while it is true we passed through a fearful epidemic, which might well account for a considerable increase in the rate of mortality, we do not see that while it lasted it should have added £1,130 to the rates; still less that it should saddle the Union with a permanent additional cost for stimulants. We trust that under the new medical régime the figures may serve only as a dark background to a bright future. Nothing can be clearer than that the path of retrenchment is the path of safety and wisdom.

"If we turn to an examination of our own medical relief books, we there find a striking illustration of the uncertainty and inconsistency of the

medical practice, and that where it leans to a careful administration of stimulants, the results are in the same degree satisfactory. We lay before you a return of the entries taken from the medical relief book at Walton for the last three months. From it we gather that to the male side of the hospital, with an average of 118 patients, there were issued 3,037 pints of ale and porter, 2,893 glasses of wine, and 6,524 glasses of ardent spirits during the quarter ending September, 1871; which give half a pint of ale or porter to every other patient and three quarters of a glass of wine or spirits to every patient every day. The deaths on this side of the house were 25. To the female side of the hospital, averaging 154 inmates, there were issued 1,960 pints of ale and porter, 1,014 glasses of wine, and 1,633 glasses of ardent spirits; giving about half a pint of ale or porter to every fourth patient, and a glass of wine or spirits to every sixth patient each day. The deaths this side were 16, or less than one-half of those on the male side in proportion to the population. To the insane wards, with about an equal issue of wine and beer, 804 glasses of spirits went to the male side and only 44 glasses to the female side; the average inmates being, males 61; females 64. From the testimony of the highest medical authorities, and from our own ideas of the fitness of things, we gravely doubt whether intoxicants of any kind should be given to idiots and imbeciles.

"Here, then, we have the main cause of the evil on one side of the house, and the remedy, if we have the wisdom to apply our experience, on the other. On the one side we have an indiscriminate appeal to stimulants, as a remedy for nearly all diseases; on the other, by a more careful and judicious treatment we have some hundreds of pounds saved, and as far as we are able to judge a considerably lower death-rate, from the same cause.

"With these facts before us, and with the returns so decidedly testifying in favour of a non-alcoholic treatment wherever it can be reached, we feel

that we should be utterly wanting in our duty if we failed to point to the great desirability, in all future appointments, of choosing the medical officers of the Union from the ranks of those who would undertake to administer alcoholic stimulants with the same care that they do all other medicines of a poisonous nature.

"There is still another source of expenditure requiring the careful attention of the guardians. We refer to the consumption of ale and porter. These cost us no less a sum than £990 for the year ending September, 1871. But a small portion of this quantity goes into the sick wards. At Walton they are using about £140 worth of these stimulants yearly, and, if we allow the same amount for the sick at Mill Road, it will be seen that we have spent about £700 on our officers and inmates during the year.

"The supply of ale and porter to able-bodied paupers, we think, should be discontinued. First, on the ground

of its being quite an exceptional usage in poor-law unions; condemned, moreover by the Government orders. Then on the ground of its impolicy, as tending to keep alive the taste for drink in those who, for the most part, have been impoverished and ruined by its use. And then, in any case, that after giving the pauper a full and proper supply of good nourishing food, we should require no labour from him beyond what his natural strength, unaided by stimulants, will enable him to perform. With respect to the supply of ale and porter to nurses and other officers, we strongly recommend that a money equivalent be granted in place of the daily allowance to such officers as may be inclined to accept it."

The following is the return from twenty-two Unions and parishes, of the consumption of stimulants in their respective workhouses, showing the total population, the yearly cost of stimulants per head, and the death-rate on the average of two years:—

A Return showing the yearly cost of stimulants and the rate of mortality, Indoor, in twenty-two Unions, on an average of two years, ending March 31st, 1871.

UNIONS.	Total Relieved.	Total Deaths.	Cost of Stimulants.			Cost per Head.		Deaths One in
			£	s.	d.	s.	d.	
West Derby ... ..	4,538	400	1,257	6	0	5	6	11
Liverpool ... ..	22,730	1,952	1,590	17	11	1	5	12
Lambeth ... ..	5,950	350	1,690	5	11	5	9	17
Islington ... ..	2,948	225	816	12	11	5	6	13
St. Pancras ... ..	6,557	491	2,108	4	2	6	5	13
Marylebone ... ..	5,266	501	2,050	10	0	7	9	10½
Sheffield ... ..	2,493	251	378	15	0	2	5	10
Chorlton ... ..	5,748	424	500	3	9	1	8	14
Leeds ... ..	4,219	224	202	7	4	0	11½	18
Manchester Hospital... ..	8,194	750	485	0	0	1	2	11
Do. Workhouse ... ..	6,093	160	273	0	0	0	11	38
Birmingham ... ..	8,912	446	376	5	0	0	10	20
Aston ... ..	1,142	60	102	1	2	1	9	19
Preston ... ..	3,358	153	116	3	7	0	8	21½
Edinburgh ... ..	4,448	151	104	8	7	0	5	30
Glasgow ... ..	1,954	180	75	9	7	0	9	11
Dublin ... ..	6,526	488	751	8	9	2	4	13
Cork ... ..	7,997	530	594	9	11	1	6	15
Newry ... ..	3,035	102	Nil			Nil		30
Armagh ... ..	2,012	98	Nil			Nil		21½
Lurgan, 1871 ... ..	2,868	111	Nil			Nil		26
West Derby, 1871 ... ..	6,581	693	2,384	9		7	3	9

## ALCOHOLIC BEVERAGES IN WORKHOUSES.

(From the *Lancet*, Dec. 9.)

It is quite necessary that the attention of Poor Law medical officers should be drawn to the increasing use of wine, beer, and spirits in workhouses, and to the remarkable difference of opinion which seems to prevail as to their necessity.

From a return published not long ago we find that the cost of alcoholic beverages in the workhouses of the Metropolis was nearly £30,000 per annum, of which £20,167 was spent in beer, £3,415 in wine, £3,326 in brandy, and £3,326 in gin. There were at the date of the report 21,000 adult inmates in these workhouses, so that the cost of alcoholic beverages amounted to no less than £1 8s. per head. A very brief examination will show the extraordinary differences which prevail. Thus, whilst the 825 inmates of the Whitechapel workhouse cost only £503, the 336 inmates of Paddington cost £678; and whilst the 968 inmates of Shoreditch cost only £738, the 768 in the City of London cost £1,033. The Bethnal Green 1,121 inmates cost £880, whilst the 518 in Camberwell cost £909. The medical officer in Bermondsey apparently orders neither brandy, gin, nor whisky, the bill for spirits being only £208, whilst the cost of brandy alone at Kennington was £338 9s. We have no wish to curb the discretionary power of medical officers, but it is most desirable that some better understanding should be come to on the subject. It might be as well to remember that the medical officers of many workhouses in

Ireland do not recommend stimulants at all, and even in Edinburgh the annual consumption is not more than 5d. per head. In Glasgow milk is found to answer the purpose of a restorative better than alcoholic drinks, and the consumption of the latter has been reduced to 9d. per head per annum.

The West Derby Guardians have recently drawn attention to the great anomalies which prevail, and the Liverpool papers remark with truth that the medical profession acts upon no fixed principle; some practitioners being in the habit of saturating their patients with intoxicants, and others giving none at all.

The mode of remunerating pauper helpers by means of extra beer is also open to very great objection. Week after week the workhouse medical officer is called upon to sign beer lists for washerwomen, scrubbers, cooks, and helpers. This is generally done at the dictation of the master, and certainly without any definite knowledge of what he is about. The whole system is a sort of education in beer-drinking, calculated to make the workhouse very attractive, for we do not believe that such luxuries are within the reach of the independent aged poor outside.

The Local Government Board might direct their attention to the evil with great advantage and satisfaction to the public, and the Poor Law Medical Officers' Association might render great service by bringing about a better understanding as to how far the use of alcoholic beverage is really necessary.



## THE MEDICAL PROFESSION AND INTEMPERANCE.

(From the *Lancet*, November 4.)

WE are exceedingly anxious that any assistance which medical men can render in the war which is setting in against bad drinking customs in society should be given. We can scarcely hope to satisfy teetotalers.

They are amongst the most intemperate of men. But we can make an attempt to satisfy our own sense of what is due from us on a question so deeply affecting the happiness of the people and the credit of the nation.

We do not want any additional evidence of the sore evil which comes of drink. We have the common evidence patent to every man who has eyes to see what passes before him day by day. And we have a great amount of very special evidence which comes to us as it comes to no other class in the community. In this matter we are the priests of society to whom confessions are made that are withheld from relatives and other priests. Sometimes we see the genesis of the habit of drinking. Very often we know of its furtive indulgence when no one else suspects it. And in the end of cases we only can know the destruction and degeneration of tissue and of organ which result, spoiling every function of the body, and blighting every faculty of intellect and imagination.

If any medical man is still unconvinced of the great influence of this factor in the production of the disease and death of our population, or disposed to treat it with indifference, we commend to his notice the report of Dr. Parkes and Dr. Sanderson, only confirming those of Dr. Trench, on the Sanitary Condition of Liverpool, in which they emphasise the intemperance of that town as one of the three great causes of the deplorable condition of the poor in it. After illustrating their statement with details of actual cases, they say, "Instances of this kind seem to occur so frequently in all the poor districts of Liverpool that we question whether 20 per cent. of the labouring class are leading lives of ordinary restraint and decency." All their informants were agreed that there is much more drinking among the poor than formerly. Of course, the old question may be put—Do these people drink because of the bad hygienic condition in which they live? To which the most sensible answer is that they cannot have better hygienic conditions while a half or a third, or a fourth of the father's wages, and sometimes the whole of them, are spent in the publichouse. Avoiding all fanaticism, we wish to impress every medical man with personal responsibility in regard to this ques-

tion. We are sure we shall not appeal in vain to a profession which can view the subject both from the scientific and the humanitarian point of view.

It is more difficult to define exactly the kind of service the profession can render; but we shall attempt to do this. There is no doubt as to the enormous influence which as a profession we have had in creating the public opinion that exists as to the uses of beer, wine, and spirits. Unfortunately, sometimes we have allowed ourselves to write testimonials instead of prescriptions, which have been published and placarded everywhere in praise of things that might be very well in particular cases, and yet very unfit for indiscriminate use. We should in future limit the expression of our opinion to patients and particular circumstances. And in regard to these particular cases we should be more specific in our instructions as to the quantity to be taken, the frequency with which it is to be taken, and the time over which such a prescription is to extend; for patients are uncommonly apt to continue the use of an alcoholic remedy long after the condition for which it was prescribed has passed away, quite contrary to their practice in regard to other remedies. The vagueness with which alcoholics are ordered seems to us the most serious charge which can be brought against the profession. We hear of leading physicians telling patients of whose previous history and of whose idiosyncrasies they can know little, to live well and drink freely of beer and wine. In a work on medicine of great excellence and authority which lies before us, we are told that, after the acute symptoms of tonsillitis have passed away, the diet should be very good, and *plenty of port wine should be taken*. We are only concerned at present with the culpable vagueness of this advice. "Plenty of port wine" is an expression which will have a different significance to every patient. One man will construe it to mean a bottle a day, and another may understand it to mean two, and every patient would see in it a high sanction for an unusual freedom, which would

be as likely to derange his digestion as to remove his asthenia. A very great amount of good would be done if medical practitioners never prescribed alcoholic stimulants without prescribing them in certain quantities, and erring on the side of moderation.

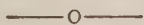
Not only should there be precision of language in prescribing stimulants, but we should seriously ask ourselves, in every case, whether it is necessary to give the sanction of our special prescription to them. Unquestionably there are many diseases in which they need form no part of our treatment. Debility is not an entity that can be driven out by a draught of alcohol. Doubtless, whatever fanatics may say to the contrary, there are states and degrees of it which urgently call for some form of alcohol. But there are many states of weakness quite curable without it, in which ordinary forms of food, with or without the customary quantity of wine or beer, are all that are needed, or in which some extra food, such as beef-tea or milk, will meet the necessities of the case. In the great class of chronic cases, we should remember that some form of stimulant is generally taken without our advice; and, unless we are specific in prescribing alcohol, our prescription is understood to mean something additional to what is ordinarily taken.

Then there is need of courage in medical men to be candid and firm in positively discouraging the use of alcohol, or of the popular forms of it, in many cases. It is lamentable to see young men losing their appetites and getting short-winded and prematurely corpulent, under the notion that

bitter beer is a real tonic, or to behold a young childless lady relieve her various pains with sips of brandy. Medical men should be explicit in their attempts to dispel these delusions.

One of the greatest hindrances to the progress of temperance is the conservatism of women. They have not taken like men—we speak now of the wealthier classes—to the use of light wines. They prefer the old-fashioned forms of drink, such as port wine, stout, champagne, and brandy. And, with their neurotic constitutions, there is a terrible danger of their getting to like these things. We, as medical men should remember this, and teach them how they can be relieved by less objectionable means. We know no reason why ladies should not have the benefit of lighter wines as well as men. They are as liable to premature and inconvenient manifestations of obesity; they are less exposed to the open air; they are more sedentary. Under these circumstances, we should be candid and courageous in explaining the advantages of the lighter forms of alcohol, and in warning them against the use of more favourite or fascinating forms.

Mr. Gladstone asks, in his noble peroration at Greenwich, "How are the ravages of strong drink to be arrested?" This is not the place to give the whole answer to this great question. But it is the place to assure statesmen of what we devoutly believe—that they will have from the medical profession all the help that science and humanity combined can give in the rectification of a habit which more than any other mars the national health and happiness.



## A WARNING AGAINST CHLOROFORM AND CHLORIC ETHER.

THE *Practitioner* for December contains a valuable article by Dr. Anstie, "On Chronic Chloroform Narcosis," from which we give the following extracts:—

"A chance question from a medical

friend, a few days back, has suggested to me the idea that there is probably some ignorance in the profession of certain facts which it is very important that medical men should understand and, when necessary, impress upon their

patients and the public generally. This friend of mine asked me, whether the constant use of large doses of chloroform, for the purpose of relieving pain, might not possibly bring about, in the end, a degraded condition of the nervous centres analogous to that induced by chronic alcoholic excess, with the result, in some cases, of actually increasing the tendency to pain? I unhesitatingly said 'yes,' and was for a moment surprised that the question should have been asked. Very little reflection is necessary, however, to convince one that practitioners whose attention has not been specially called to the comparative actions of the various narcotics (and particularly their chronic actions) would possess scarcely any clue to guide them to the facts which will be considered in this paper. One needs to be for ever repeating what is constantly forgotten, that alcohol and chloroform are strictly analogous with each other, though different, in nearly all the phases of their action. Sulphuric ether is similarly analogous to both. They are all three pure *stimulants* (i.e. restorers of calm natural function) in small doses, *incbriants* when given in larger quantities, and *anæsthetic narcotics* in full doses. The most important peculiarity of chloroform, as compared with alcohol especially, is the fact that its great insolubility in the serum of the blood causes it to escape entirely, or almost entirely, from the lungs within a very short time (one hour?) after its administration, and without undergoing decomposition in the body. As a result of this latter fact, chloroform, however dangerous at the moment of surgical narcotisation, is exceedingly free from tendencies to produce after-mischief, since the organism is speedily rid of its presence. Unfortunately, the knowledge of this latter familiar fact has led to unwarrantable inferences as to the effects of a kind of chloroform administration which is radically different from the ordinary induction of surgical anæsthesia. There are a multitude of sufferers from chronic painful diseases who have got upon a wrong groove in this

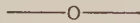
matter. Either because they have not tried the proper remedies for the relief of pain, or because these remedies have failed to do good, they have taken to the practice of narcotising themselves with chloroform (which is so easily done, and so completely effects their purpose at the moment) on every occasion when their sufferings rise to any considerable intensity. One meets with numerous cases of chronic neuralgia and other pains that more or less vaguely resemble neuralgia, and of chronic spasmodic affections, like asthma, in which the patient has got into the habit of using two, three, or four ounces of chloroform every day, and sometimes even much larger quantities. A bottle of chloroform is kept close at hand, and a teaspoonful or so (sometimes much more) is poured upon a handkerchief and inhaled: this is repeated an indefinite number of times in the twenty-four hours, according to the promptings of pain or other nervous distress. Now I shall not dwell upon one obvious danger of such a practice, which has, however, been exemplified by several catastrophes which both the public and the profession seem to have too soon forgotten—I mean the danger of fatal chloroform narcosis from this exceedingly rough and unskilful tampering with a potent narcotic. Apart from any such sudden and fatal mischief, I wish to show that the practice of constant and protracted dosing with chloroform can lead to chronic mischief, less in degree no doubt, but essentially similar in kind, to that which is produced by long-continued alcoholic excess."

"Sometimes the effect of prolonged and lavish use of chloroform on the class of subjects to whom we have just referred is even more mischievous. It has been known to take the form, especially in women who are at or near the menopause, of violent erotic excitement, to which no doubt there was a tendency resulting from the physiological state, but which was indefinitely aggravated by the injudicious use of chloroform; the proof being that it diminished, or even practically ceased, immediately that the drug

was discontinued. I am sure that this is a serious matter, and one that requires to be most carefully borne in mind, considering the great tendency of women at the grand climacteric to seek relief from their distresses by the shortest and most effective method that may happen to present itself. Drink is the worst danger, but many a woman who would shrink from brandy would take to chloroform, because it seems to be only a medicine. The same remarks apply, more or less, to the periodic times all through the sexual life of woman. It is not merely, however, by such disturbances as those already described, that chloroform, when chronically abused, revenges itself on the organism. Slowly—much more slowly than is the case with alcohol—there are produced, in a certain number of instances, degenerative changes which accurately imitate the degradation of tissues produced by chronic drink: at least, such is my distinct belief.”

“A word or two may be said on the subject of chloroform *drinking*. I am not aware that chloroform, as such, is consumed in any considerable quantity as a draught to relieve pain or other discomfort. But there is certainly a great deal of injudicious use of chloric ether for trivial nervous ailments; and this practice is probably a good deal more common than that of the use of chloroform itself, either with or without medical sanction. Now ‘chloric ether,’ as every medical man knows, is simply alcoholic spirit impregnated with from 5 to 10 per cent. of chloroform. The effect produced is a compound of those of alcohol and of chloroform. I

do not pretend to possess any authentic knowledge of the exact extent to which this kind of amateur medication is diffused; but from facts which pretty often come under my notice it is difficult not to conclude that there is an increasing disposition among delicate and ‘nervous’ persons to avail themselves of the comfort imparted by this drug. And although it would not be so easy for people to take enough chloric ether to do themselves a serious mischief as it would be to accomplish such mischief by the use either of chloroform or of alcohol pure and simple, yet there is this danger, that chloric ether is far more likely (as a seemingly innocent preparation) to be taken frequently for slight nervous ailments. It certainly forms one of that class of household remedies, of which our forefathers knew nothing, but which in the present day are handled with increasing freedom by *soi-disant* invalids. I merely wish, here, to call the attention of medical men to the subject, and to ask them to be very cautious how they give any general recommendation of chloric ether as a remedy to be used for depression of spirits, ‘nervousness,’ and so forth. It is just the kind of remedy likely to be taken lavishly and thoughtlessly for such distress, more particularly as women suffer at the menstrual period: and there ought to be no disguising the fact, that its use under such circumstances, without strict medical regulation and control, is likely to degenerate into a kind of tipping, only a little less mischievous and degrading than ordinary alcoholic excess.”



## FRENCH DRINKS AND DRINKERS.

THE progress of alcoholism in France has since the termination of the civil war incessantly occupied a prominent place in the deliberations of the learned societies, in the public

journals, and in the debates of the National Assembly itself. The French Academy of Medicine, after listening to and approving various papers proposing energetic means for the legal

repression and punishment of habitual drunkenness, has appointed a special commission to draw up a popular warning on the dangers of alcoholic liquors, for which it proposes to secure a widely extended circulation, either by publishing half a million of copies as a first edition, or by circulating it throughout the kingdom by official aid. This popular warning, of which the text is before us, is a little too academic in style and withal too long-winded altogether to deserve its title. It is, moreover, too shallow in its legal appreciations to be of value to the law-makers, and too wordily eloquent to be read by working men; but these are not the only persons who abuse alcohol; and to the heads of workshops, to those who control and direct the masses, and to the intelligent artisans as to all educated persons, this warning conveys useful information in a style of irreproachable clearness. It is very lengthy, and commences by an explanation of the poisonous effects of alcohol on the system. It traces a large proportion of the worst results to the fatal habits which so many people have acquired in our days of drinking, either in the morning before food—breakfast or lunch,—or in the afternoon before dinner, undiluted wine, brandy, or liqueur. This “morning nip,” *coup de matin*, has provided every lunatic asylum with a certain proportion of its inmates. A pint of small beer, or of cider, or of wine and water, is as much as any man can digest advantageously at a meal. These drinks, it should be remembered, contain in France not more than from 2 to 4 per cent. of alcohol, while our ordinary English beer contains at least 8 per cent. The habit of adding brandy to the cider, which is said now to prevail among the French labouring population, is justly denounced as fatal; while the immoderate quantities of these light drinks swallowed at a meal are unreasonable and mischievous. But it is brandy and *cassis* which are ruining the people. So long as brandy was obtained only from the vine, its production and consumption were happily limited. Now there is an illimitable

supply from the potato, from various grains, and from the beetroot. The workman who formerly at the most swallowed a glass of white wine fasting “to keep out the fog” now drinks a cheap liquor, *cassis*. The essential oil and sugar which this contains tickle the palate more than brandy. But even *cassis* has become too mawkish for the popular taste, and it is being replaced by *le petit mûle*, which is nothing else than *cassis* fortified by a considerable proportion of pure alcohol. With this goes hand-in-hand the pernicious use of absinthe; which is especially dangerous, not so much on account of the peculiar essential oil it contains, of the properties of which a good deal has been said without anything being proved, as on account of its very large proportion of alcohol—exceeding that of other liqueurs—and because it is always drunk before meals; just at the time when the alcohol is most completely absorbed into the system, and with a view of restoring the dilapidated digestive powers, to which, on the contrary, it only gives a momentary fillip, while it renders them every day weaker. That apparently innocent and very widespread habit of taking after food a *chasse* of pale brandy with hot coffee (which renders the action of the alcohol perhaps more energetic) is charged by the French Academy with producing digestive troubles, obstinate headaches, bronchial catarrhs, gout, gravel, and other trifles of the kind. If for absinthe we substitute sherry and bitters, orange brandy, and dry curacoa in the clubs, and for *cassis* and *petit mûle* we read old tom and gin and bitters, there are very few of the sentences of this homily which may not be applied with benefit by all classes in this country.

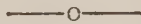
We cannot follow the popular warning through all its elaborate details of the poisoning of the system produced by alcoholic liquors. It describes the pathology of drunkenness and traces the insidious disorders produced by quiet tippling. The diseases of the nervous system, the brain, the liver, the hoarse bronchitic voice of tipplers,

their inflamed visage, and their peculiar susceptibility to epidemic poisons, are set forth in detail and without exaggeration. The warning says truly that the tutelary providence of drunkards of which so much has been said does not exist. The immense proportion of the accidents brought to hospitals due to this cause prove it. Drunkenness is a source of great embarrassment to the surgeon. It often renders diagnosis difficult, and treatment incomplete and inefficacious; it precludes the employment of useful means—bleeding, emetics, and chloroform. It postpones pressing opera-

tions, and obliges the practitioner to use force to the patient, as the veterinarian does to the brute. A slight wound of the drunkard becomes serious, and he dies where another man would have been saved. The report passes on to the enumeration of the mental disorders and the physical destruction produced by inordinate drinking. If the Temperance League chose to translate and circulate this document in Great Britain, it could do harm to no one except the liquor-dealers, and might do a great deal of good to many.—*Pall Mall Gazette*.



## Notes and Extracts.



**TREATMENT OF CHOLERA.**—There is one remedy which is almost universally applicable in all forms and stages of the disease, and that is an abundant supply of cold water to flush the intestinal sewer, and to wash out the poisonous discharges. A copious imbibition of pure cold water will suffice for the cure of most curable cases.—*Dr. George Johnson, King's College*.

**TEMPERANCE AND LONGEVITY.**—The *New York Insurance Monitor* quotes from a report of the Pennsylvania Sanitarium some statistics by Dr. Parish, which it says “ought to attract attention and excite alarm among those who quaff the flowing bowl.” They are as follow:—

At age.	A temperate man's chances of living (years).		An intemperate man's chances of living (years).	
20 .. ..	44·2	.. ..	15·6	
30 .. ..	36·5	.. ..	13·8	
40 .. ..	23·8	.. ..	11·6	

The *Monitor* adds, “More than half his days are sacrificed by the drinker to his debasing appetite, and that is

not all; his vices and his weaknesses are the dreadful heritage to which his unfortunate children fall heir.”

**DELIRIUM TREMENS.**—Dissatisfied with opium, chloral, and digitalis in this disease, M. Decaisne has tried the expectant method, and finds in several cases that the patients did very well. Absolute abstinence from any fermented liquor, a simple diet, a dose of Epsom salts, a tepid bath of an hour's duration every day—such were his orders. In five days on an average the patients were almost cured, a result closely corresponding with that obtained by M. Decaisne in the thirteen cases treated by drugs; in these last the great relief being obtained in five days by opiates, and in six days by digitalis and chloral. It may be suggested that there are many cases of delirium tremens that might be left to expectancy with confidence, while others would scarcely be so abandoned by a prudent practitioner.—*The Doctor*.

**STRONG DRINK IN HOSPITALS.**—In a circular issued by the promoters

of the proposed Temperance Hospital, some striking facts are given respecting the cost of alcoholic drinks consumed in the London hospitals. The following are examples:—

	Bread and Milk.			Spirits, Wine, and Beer.		
	£	s.	d.	£	s.	d.
Middlesex Hos- pital (1870)	921	11	0	1162	17	0
University Col- lege (1870)	591	14	7	618	1	6
Metropolitan (1868) ...	153	4	2	152	5	7
Victoria Park Consumption (1870) ...	464	13	5	385	0	3
Hampstead Consumption (1869) ...	159	6	6	112	11	10

In the London Hospital during the year 1870 the total expenditure for wine, spirits, and beer, was £2,437 7s. 7d., while the total bread account was £904 8s. 4d. The total house expenses, including all food (excluding beer), was £12,489 16s. 2d., so that the cost of alcoholic liquors was nearly one-fifth the entire food and household costs of every description.

**DRUNKENNESS AND CHOLERA.**—In a paper by Dr. C. A. Gordon, C.B., Deputy Inspector-General of Hospitals, published in the *Medical Press and Circular* of December 13th, 1871, Dr. Gordon says:—"I have already had occasion to allude to the evils which in India attend the distribution of money and bounty to soldiers, and especially to the drunkenness and riot which prevail at such times. Official reports inform us that under such circumstances cholera, in 1829, broke out among the men of the 47th Regiment, then quartered at Berhampore, they having shortly before received their prize money for Ava, and that a similar occurrence took place at the same place among soldiers of the 14th Regiment after they had been paid their prize money for Bhurtpore. In the same year cholera, in epidemic form, attacked the men of the Buffs, stationed at Bhaugulpore, immediately on those who had volunteered from the 59th Regiment had received their

prize money for Bhurtpore. We learn that much drunkenness prevailed there from the time those men joined the Buffs, and that the soldiers exposed themselves recklessly to the sun, roved about in search of liquor, and often bathed in the adjoining river, regardless of the dangers they thus incurred."

**ALCOHOLIC EXCESS, A CAUSE OF EPILEPSY AND PARALYSIS.**—Dr. C. Handfield Jones has contributed a paper to the *Practitioner* (December, 1871), in which he gives details of a series of severe cases of epileptic attacks and paralysis which he believes to have been occasioned by alcoholic excess, and shows that alcoholism is often the cause of those diseases in cases where its existence is not at first suspected. Dr. Jones sums up as follows:—"It can hardly be necessary to say that I claim no large rôle for alcoholic excess in the causation of paraplegia. In most cases of chronic alcoholism the symptoms are chiefly cerebral, and yet even in these the muscular tremors seem rather to belong to the spinal cord than to the higher centres. Again, it is but seldom that paraplegia will not be found to acknowledge some other cause than alcohol. But that in some instances the co-existence of alcoholism and paralysis is not merely accidental I entertain very little doubt, and I advise practitioners not to exclude too lightly this influence from their list of possible causes. The only effective treatment of such conditions as these requires of course the withdrawal of the noxious agent; and the administration of such remedies as may improve the nutrition of nervous tissue, among which may be mentioned cod-oil, hypophosphites, strychnine. Yet more important, however, is restoring the functional power of the irritated and half-inflamed stomach, so that a due quantity of nourishing food may be taken and digested. These things being done, and done persistently, recovery is possible, unless, indeed, we have to say sorrowfully as the little maid to Guinevere—'Late, late, too late.'"

THE  
MEDICAL TEMPERANCE JOURNAL.

April, 1872.

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Original Contributions.

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THE MEDICAL DECLARATION AND ITS CRITICS.

“THE now famous Medical Declaration”—so spake the leading journals of that manifesto only a week or two after it was issued. With how much greater emphasis may this phrase be used of it now, considering the amount of professional discussion and journalistic comment that have since been expended upon it. It was on the eve of the Christmas season that it first saw the light; just in time to be inserted and briefly alluded to in our last number, but not in time to receive more at our hands than a cordial word of welcome. In now reverting to it, we find that during the intervening months it has grown into an importance which its most sanguine promoters could not have ventured to anticipate. It attracted prompt and almost uniformly favourable criticism from the various medical organs, the leading metropolitan journals, and a large proportion of the provincial press. More interesting still, it evoked spirited and copious discussion among prominent members of the medical profession in the columns of the *Times*, and to some extent in the medical journals. “Who shall decide when doctors disagree?” To this we reply by expressing the hope that practitioners themselves, in numerous instances, of all grades and ages, but especially those who have more recently entered on their professional career, will be led by this declaration and discussion, to abjure the too prevalent method of indiscreet alcoholic prescription; and that an intelligent public, among whom no less than among their medical attendants these fresh lights are falling, will presume to decide for themselves to abandon tippling under pretext of health, and to respect their physician all the more for sternly refusing to pander to their alcoholic cravings.

A document so conspicuous and influential could not escape the

penalty inseparable from its importance. We do not mean free criticism, for this it invited and welcomed, but misconstruction of its terms, professional wincings in regard to its form, doubtful hints as to its utility, and unworthy innuendoes as to the reality and respectability of its parentage. A statement appeared in the *Times* to the effect that the name of the President of the Royal College of Physicians, Dr. Burrows, had been used without his sanction, when, in fact, that distinguished man had exerted himself more than most in commending the Declaration to the attention and adoption of all medical men. Dr. Anstie so far forgot his high name as to charge its promoters with having resorted to "pressure and terrorism"; a charge which, while explaining it, not without signs of regret, in the *Practitioner* for February, he only renders more offensive by the flippant pleasantry to the editor of the *British Medical Journal*:—"I give him my word of honour that I did not for a moment suppose, or intend my readers to suppose, that he sent his office porter round with a thick stick, to threaten to break the heads of those gentlemen who hesitated to sign the Declaration." These and kindred insinuations, and the intrinsic importance of the manifesto as already in some sort historical, render it desirable that we should embody in these pages a brief record of its origin, and some analysis of the comments that have been passed upon it.

It owes its existence to the growing sympathy that has sprung up between the temperance reformation, broadly viewed, and influential sections of the medical profession. This has for years been a favourite and foremost field in the operations of the National Temperance League; and one which it has worked with no small energy, discretion, and success. It was at one of these medical conferences, held in 1869, that this journal was initiated; and from it also there emanated the valuable pamphlet entitled, "Medical Experience and Testimony in favour of Total Abstinence." Other conferences followed; and more recently this growing intercourse has ripened into great demonstrations in Exeter Hall, exclusively addressed by abstaining physicians, one of which was held on the 31st of October last, and another on the 30th of January, which are respectively reported in our last and in our present number. The medical journals had from time to time been giving noteworthy utterances, and variously indicating modes of action that might be taken by the profession in the interests of temperance. For example, directly on the appearance of the Declaration, the *Lancet* (December 23rd) says:—

"When six weeks ago we urged upon medical practitioners to take a very responsible view of the prescription of alcohol and the duty of prescribing it specifically with reference only to present use and actual circumstances, we felt that we were not appealing in vain; but we scarcely expected that in so

short a time a medical declaration respecting alcohol would appear justifying our view of the question as a very grave one, and our assertion that medical men would be ready to give help in the rectification of a habit which more than any other mars the health and happiness of the nation. If any of our readers will take the trouble to compare our own sentiments on the subject with those expressed in the Declaration which we publish elsewhere, and which is signed by 250 of the leading members of the profession in town and in the provinces, he will be struck with the similarity, if not the identity, of some of the points in both. This list of names is very representative. It is, indeed, so inclusive that a few honoured names which are absent are conspicuous by their absence. It is so comprehensive that one is surprised to miss a particular name that seems necessary to give complete authority to the document."

It was another medical journal, however, which prompted the first steps that issued in the manifesto. On the 30th of September last, the *British Medical Journal* commented in favourable terms on the article that had appeared in our pages from the pen of Dr. McMurtry, of Belfast, on "The Duty of Medical Men in relation to the Temperance Movement." Referring to the havoc caused by alcohol, our contemporary went on to say:—

"The influence of medical men, if they were united and agreed, might be all-powerful on this subject; and we should be glad to see a conference of medical men, including those of the highest class, originated in some really influential quarters, with a view to giving this subject a more thorough discussion than it has yet had. We should like to hear a discussion in which Parkes, Edward Smith, Hughes Bennett, A. P. Stewart, Paget, Jenner, and some of our leading provincial practitioners, would take part, in which the whole subject should be probed. To what extent, if at all, are physicians justified in recognising alcohol as an article of daily food in health? Does the habit of prescribing alcoholic drinks act injuriously upon the morals and welfare of the people? Is it possible or desirable to substitute the more enticing forms of alcohol by medicinal and less alluring forms? We all of us sympathise with the ends which the National Temperance League has in view. A small minority only practically participate in their means of action. Can we in any way, and in what way, help to rescue this nation from the curses which drink brings upon its population?"

This timely word led Mr. Rae, the secretary of the National Temperance League, to seek an interview with the editor of the *British Medical Journal*, Mr. Ernest Hart, who recommended him to consult Professor Parkes, of the Army Medical School, Netley, and other leading physicians, in regard to the feasibility of such a conference as had been suggested. Dr. Parkes questioned the utility of a conference, and recommended a Declaration instead. Mr. Rae urgently requested that he would draft such a Declaration as the profession in general would be prepared to sign. This was done, when Mr. Rae submitted it without delay to Dr. Burrows, Sir Thomas Watson, Sir James Paget, and Mr. Busk, each of whom suggested a few alterations, which were at once adopted. These four physicians then signed the Declaration; after which it was presented, at Dr. Burrows' suggestion, "to some of the senior and most distinguished members

of the medical profession in London" for signature. In the following week, when twenty-eight signatures had been obtained, a proof was sent by post to the physicians and surgeons of the metropolitan and chief provincial hospitals, accompanied by a circular signed by Dr. Burrows, who, in a letter to the *Times*, on the 13th January, recounting these facts, says:—"Numerous letters were addressed to me in reply to the circular, from all parts of the country, and, with three exceptions, they all expressed their concurrence with the Declaration, and thanks to myself for the part I had taken in this important question." The Doctor adds:—"Thirty years' experience as physician to St. Bartholomew's Hospital and in private practice among the upper and middle classes of society has convinced me of the accuracy of the statements put forth in this document, and that a note of caution, such as is contained in the Declaration, was much needed, and may be productive of great good. I therefore willingly accept the responsibility that attaches to me for having signed the 'Declaration respecting alcohol,' for having promoted its circulation among the members of the medical profession, and for its subsequent publication."

Such are the "pressure and terrorism" that have been exerted on the profession, to extort their reluctant adhesion—according to the gentle and complimentary construction of the editor of the *Practitioner*. The gravity of this charge, and the eminence of its author, must be our excuse for recounting the origin of this Declaration movement with what otherwise would have been a needless minuteness of detail. It is somewhat odd that the opening paragraph of the obnoxious document should have stung those reclaimers into such high sensitiveness for the honour of the profession, when these same gentlemen can publish insinuations of "pressure and terrorism" which implicitly brand hundreds of the profession as a pack of gregarious muffs. If that was a whip of cords, this is a whip of scorpions. Dr. Parkes, the drafter of the Declaration, speaks none too strongly when he says, "No one but Dr. Bree (one of these remonstrants in the *Times*) can believe it possible that 250 gentlemen have been juggled into signing a paper which they are not prepared to support. On the contrary, the Declaration not only expresses the deliberate opinion of those who signed it, but, to judge from the correspondence which has been published, there is no reason to fear that any sentence in it will be shaken." Of course we should be the last to deny that the eminent names that headed the list exerted their legitimate influence: what else could they do? They were sought and obtained for that end, and have lent the movement a propulsion it could not else have acquired. The comparatively few of those invited who declined to sign it,

declined on verbal grounds, while professing sympathy with the object. This shows that the document embodied with a surprising degree of accuracy the general feeling of the profession; and we can bear emphatic testimony to the great cordiality, as well as to the remarkable unanimity, with which this matter has been taken up by those whose names have been published in connection with it.

A deliverance, framed to secure the adhesion of as many as possible of the medical profession, could not reasonably be screwed up to the level of our total abstinence platform. This was not the end contemplated. We have our professional abstainers not a few, and we hope ere long to have many more; but what in the present case was wanted was a medical testimony which, though short of this, might by its breadth and weight do vastly more to dispel alcoholic delusions, and break the back of vicious customs, than even the acquisition—much as we desire it, and will strive to obtain it—of a good few additional practitioners to the ranks of total abstinence. This we state to rectify the misconception of some of our abstinent friends who have hastily inferred that, because the National Temperance League has promoted the Declaration, it therefore stands committed to its terms. Not so. The League, and all temperance reformers, rejoice in its caveat against alcohol so far as it goes. Though short of total abstinence principle, it is far in advance of social sentiment and popular practice; and as a document of highest professional authority, it may be rationally expected to have enduring and beneficial results.

That it will, is already amply pledged by the degree of attention it has attracted, and the amount of discussion it has provoked. To some of the salient points in these we will now advert, which renders it needful that we here reintroduce the Declaration entire.

“As it is believed that the inconsiderate prescription of large quantities of alcoholic liquids by medical men for their patients has given rise, in many instances, to the formation of intemperate habits, the undersigned, while unable to abandon the use of alcohol in the treatment of certain cases of disease, are yet of opinion that no medical practitioner should prescribe it without a sense of grave responsibility. They believe that alcohol, in whatever form, should be prescribed with as much care as any powerful drug, and that the directions for its use should be so framed as not to be interpreted as a sanction for excess, or necessarily for the continuance of its use when the occasion is past.

“They are also of opinion that many people immensely exaggerate the value of alcohol as an article of diet, and since no class of men see so much of its ill effects, and possess such power to restrain its abuse, as members of their own profession, they hold that every medical practitioner is bound to exert his utmost influence to inculcate habits of great moderation in the use of alcoholic liquids.

“Being also firmly convinced that the great amount of drinking of alcoholic liquors among the working classes of this country is one of the greatest evils of

the day, destroying—more than anything else—the health, happiness, and welfare of those classes, and neutralising, to a large extent, the great industrial prosperity which Providence has placed within the reach of this nation, the undersigned would gladly support any wise legislation which would tend to restrict, within proper limits, the use of alcoholic beverages, and gradually introduce habits of temperance.”

The weight and number of the signatures attached to it, even more than its purport, evoked comment from all quarters. The medical journals first claim our attention. As might be anticipated, they lost no time in adverting to what so distinctively lay in their way; and this they in general did in the most commendatory terms. We have already cited the words in which the *Lancet* of December 23rd cordially welcomes the Declaration as a virtual embodiment of the sentiments which it had six weeks before expressed. The *British Medical Journal*, in like manner, hails it as the gratifying result of the suggestion which itself made on the 30th of September, in a passage it quotes, and which we too have above quoted, suggesting a conference of leading medical men on the subject, and expressing sympathy with the aims of the National Temperance League. This suggestion, as we have seen, prompted the action which led to the Declaration, and thus secured its object in a slightly different way. The *Medical Times and Gazette* calls attention to the weighty signatures attached to it as including “nearly every medical member of the Royal Household—a list that First President Elect of the future British Republic, Citizen Dilke, will gloat over;” followed by “a large number of the most eminent” hospital “physicians and surgeons in London,” and not a few “well-known and trusted provincial medical authorities;” and all this it notices as claiming for the document “the most respectful attention—the more so (adds the *Gazette*), as it is open to criticism.” What this last expression refers to, we shall see in course. The *Medical Press and Circular* inserts the document and its signatures, and adds some words of commendation. The *Doctor* enlarges its space some pages in order to give “so important an expression of medical opinion,” with its influential signatures, entire. The *Edinburgh Medical Journal*, in expressing its approbation of the document, states its belief that, in Scotland, “at no time during the last forty years has alcohol, in all its various forms, been more sparingly and considerately employed in all classes of disease than it now is;” but “appreciates the appropriateness of such a Declaration emanating from London, where the precepts of the late Dr. Todd gave so decided an impulse to the indiscriminate and inconsiderate use of alcohol in diseases of all classes.” These testimonies amply show the cordial acceptance with which the medical journals greeted the appearance of the Declaration.

No less appreciatory were the comments of the general press. The *Times*, in some remarks on the subject, says :—

“ If any enthusiasts ever had a right to be heard, surely it must be they who stand at the very gates of the grave to watch and avert the impulses which drive the crowd thither, and to rescue those they can. The men who ought best to know why people flag, droop, sicken, and die, and whether they need die as they do, tell us that most lives are shortened or maimed by their owners. The majority are suicides who poison themselves.”

The *Daily Telegraph* justly and impressively says :—

“ Not without reason do the doctors hint, that they see more of drunkenness than even the clergyman, the philanthropist, the publican, or the policeman can see. Those functionaries are only enabled to look at the outside of the show ; it is the doctor's gloomy privilege to penetrate behind the scenes. He is the repository of the most dismal secrets. He is aware of nervous attacks which are due simply to too much brandy ; of ‘ constitutional giddiness ’ which arises solely from a surreptitious fondness for gin. He has seen the black bottle under the pillow, and has espied the flask of cognac in the dressing-case. He knows how some of his patients can get tipsy, not only on exciseable liquors, but upon eau de cologne, upon ether, ammonia, opium, hemp, and chlorodyne. There is no use in telling lies to your doctor ; if you do, you die.”

The *Daily News* says :—

“ The medical men deserve great credit for their warning. Its authority is commanding, and, assuming the doctrine to be sound, its influence will sooner or later be irresistible. . . . A great part of the drinking done in this country—by far the greater part of all that is not caused by mere love of excitement and sottishness—was based upon an honest British conviction that a strong stimulant every now and then was really a wholesome and invigorating sort of thing. If it once can be settled conclusively that the familiar use of alcohol in any but the most moderate quantities is bad and noxious—that alcohol as an article of diet has little value and much danger—a great change of social customs will follow. Rational beings are always governed in the main by the rules which they believe are for the prolongation of life and the benefit of health ; and the habits of society in the end are always dictated by rational beings, and not by gluttons and drunkards.”

The *Morning Post* pronounces the document to be, at this time especially, one “ of particular importance from whatever light it is regarded.” The *Saturday Review* speaks as we should expect from its recent seasonable exposures. We cannot further cite, even in the most compendious morsels, the numerous other favourable notices the Declaration has received from the metropolitan and the provincial journals. Some of these, as might be expected, are qualified by misgivings, or dashed with cynic touches, according to the mood, as in the veins pursued by the *Spectator* and the *Scotsman*, the latter dearly delighting to set the doctors by the ears ; but all admit the intrinsic weight and value of the Declaration, and anticipate from its promulgation results more or less beneficial.

It is now time to notice the medical discussion which the

Declaration kindled, on its first appearance in the columns of the *Times*. This was begun by Mr. F. C. Skey, in a letter dated December 25th, in which he assigns the following reasons for declining to sign the Declaration:—

“1. Who of us has a right to charge any members of our profession with inconsiderately prescribing for their patients? I object to the ‘Declaration’ because it is dictatorial—assailing the deliberate judgment of a large body of eminent members of the profession.

“2. Because the facts on which it is based are very questionable. I have not myself witnessed these ‘many instances’ referred to of ‘intemperate habits engendered by the medical administration of alcohol,’ and I don’t believe them.

“3. Because I believe the first two paragraphs will prove inoperative to any useful purpose, so far as alcoholic stimulants are prescribed on principle, and not wantonly ordered to gratify inclination. This alone can justify the term employed in the ‘Declaration’ of ‘inconsiderately prescribing.’”

This he followed up with another letter, dated next day, to the same effect, in the *British Medical Journal*. The first of these reasons exquisitely exemplifies the “dictatorial” sentiment against which it causelessly protests; for what dictatorship could surpass that which would forbid to medical men, jointly or severally, the right to testify against what they conceive to be inconsiderate modes of prescription, and to question the declared “judgment,” however “deliberate,” of any “members of the profession,” however “eminent”? The second reason is valueless, for the fact which Mr. Skey questions as what “he has not himself witnessed,” in the degree alleged, stands demonstrated by evidence clear as the sun in the heavens. The third reason is self-evidently absurd; for it implies that there can be no “inconsiderate prescription” of alcoholics unless they “are wantonly ordered to gratify inclination.” Dr. Risdon Bennett briefly and suitably replied to Mr. Skey’s letter in the *Times* of next day; and other professional pens straightway mingled in the discussion. Dr. Anstie had already, in a letter to the *Lancet*, December 28, while admitting occasional harm from “injudicious prescriptions of alcohol,” branded it as “a great and mischievous misrepresentation to imply that the amount of drunkenness so produced bears any appreciable proportion to the total mass of intemperance,” which he ascribes mainly to extravagance and ignorance; and he protests against the assertion, as “conveying a perfectly erroneous idea,” that “the dietetic value of alcohol has been immensely exaggerated.” This is to take the bull very courageously by the horns. Considering the infinite fallacies afloat as to the “refreshment” and “nourishment” ministered by alcoholic fluids, Dr. Anstie might have found ample accommodation for his own peculiar theory of “the alimentary character of alcohol,” without feeling himself disagreeably elbowed by the guarded and really unques-

tionable assertion on which he comments. Like Mr. Skey, Dr. Bree, and others, Dr. Anstie is a zealous admirer and champion of the late Dr. Todd; but all these writers so far do homage to the tragic truth as to throw out copious caveats against "the abuse of intoxicating liquors."

Mr. Skey, in one of his letters, with a sincerity of conviction and a devotion to his eminent preceptor which all must respect, bases his defence of free alcoholic prescription on a theory of debility to which alcohol is the appropriate antidote; and this theory he not only asserts, but is at some pains to expound. An admirable opportunity was thus afforded for confronting this alcoholic Dagon and smiting him to the ground; a task happily undertaken by one of the signatories of the Declaration, and one of the foremost names in medical science—Dr. Samuel Wilks, Physician to Guy's Hospital. It is refreshing to see him crossing pens with his opponent on the point-blank issue: "Mr. Skey has stated the case against which we protest." Dr. Wilks says:—

"Mr. Skey's therapeutic formula is striking for its simplicity. All diseases have their origin in debility; wine and brandy strengthen: therefore wine and brandy are the remedies for all diseases. This reasoning, I am sorry to say, is too often put in practice. Dr. Todd himself seemed to act on some such theory, and even went so far as to maintain that in some diseases—as, for instance, fevers—alcohol was an antidote and would arrest their course. He was utterly mistaken in this view, as all experience has subsequently shown; and as to the necessity of stimulants in fever, I will merely state that in my own wards in Guy's Hospital I treat fever, as a rule, without stimulants, and with the best results. Never, perhaps, is Mr. Skey's theory more injuriously acted upon than at the present time, when bronchitis is so prevalent. We are called to see persons breathless, livid in the face, the whole system being gorged with blood which cannot circulate, and forsooth, because, as a necessary consequence, the wrist-pulse is weak, alcohol is administered. Many thus are killed whom our forefathers would have saved by the lancet.

"There has, indeed, been a considerably increasing reaction against Dr. Todd's teaching, with the happiest results, and I demur entirely to Mr. Skey's doctrine that all diseases depend on debility and require supporting remedies. If any do require alcohol, it should be given with the same care and judgment as any other drug, such as iron or quinine. It is this reaction against the unfortunate belief that all diseases originate in debility, and therefore that patients must be 'kept up,' which has instigated so numerous a body of the profession to sign the Declaration. Mr. Skey has stated the case against which we protest."

Throughout this discussion, the head and front of the Declaration's offending was the alleged insult to the profession contained in its opening paragraph; which by and by induced some physicians in the Cheltenham district, prior to adopting it, to modify (though really without necessity) a few of its expressions. Dr. Beale, at the very first, objected to sign it on this ground; and afterwards, in combating some positions in the above-cited letter of Dr. Wilks, he repeats his protest in what we cannot but consider an exaggerated strain, and observes—truly enough, had it

only been to the purpose—that “signing inconsiderately is surely a fault as great as prescribing inconsiderately.” Dr. Anstie, “as an old pupil of the late Dr. Todd, joins his protest to that of Dr. Beale against the attack of Dr. Wilks on Todd’s memory,” names a “damning fact,” by way of *argumentum ad hominem*, about one of the signatories telling a lady to “drink wine to the verge of intoxication,” and dismisses the affair as bearing the “flavour of strongly pronounced cant.” Dr. Moxon speaks in a similar vein. The *Lancet* very needlessly betrays the same sensitiveness in the sharp reference it recently made to the incident of the Declaration being posted in the same packet with Dr. McMurtry’s stirring paper, in which he makes the charge of “inconsiderate prescription” with no bated breath.

To all this the reply is threefold. First, the terms of the Declaration have been wrested to a sense they do not bear. And here let Dr. Parkes himself, its framer, speak. In a letter to Dr. Anstie, in the *Practitioner* for February, he says:—

“It appears to me that you do not fairly state the very obvious meaning of the first paragraph of the ‘Declaration.’ It does not assert, nor if carefully read can it possibly give rise to the inference, that the great national intemperance is owing to our prescription of alcohol; nor has it been so understood by the public. I have read twenty leaders in the different London and provincial papers, and in not one of them has the first paragraph of the ‘Declaration’ been interpreted in your sense. The plain statement is, that cases of drunkenness have arisen from inconsiderate prescribing; and as you not only admit this, but have already published a warning on the subject, I cannot see what logical ground you have for the expressions you have used in reference to the paragraph and to those who have signed it.”

Secondly, is it come to this, that the medical profession, so independent, so progressive, and from its nature so experimental, must conduct its noble vocation of healing, which is both a Science and an Art, with such prudish timidity as to vent nothing, however important, that may offend some thin-skinned members of the guild? If so, it is a pity; for then medical science is behind physical science, behind even political and social science; and must lumber on, tongue-tied, behind the great tide-wave of Progress, whose voice is free and multitudinous as the voice of many waters. Every one knows that medical science is the very last to answer to this description.

But our third and best answer to all that morbid sensitiveness is, that the charge in that opening paragraph, which has stirred so many into this “sudden flood of mutiny,” is, even had it been expressed with tenfold greater emphasis, incontrovertibly true.

The simple fact that transpires and is freely acknowledged throughout these discussions, to wit, that alcohol had become a fashionable medicine, just as bleeding had been before it, sufficiently indicates how rash the prescription of it was certain often

to be. "We had fashions in medicine forty years ago," said Dr. Munroe, of Hull, at the late meeting in Exeter Hall, "and we have fashions now. Forty years ago we used to bleed every one: all sorts of persons, of all ages, of all sizes, and of both sexes. It was a common thing for a man to come into the surgery in the morning, tuck up his sleeve, and to say, 'Draw me a pint of blood; it's about the time,' with as much *sang froid* as a man would go into a publichouse now and say, 'Draw me a pint of ale.' In fact, that was the bloody era of our profession. I believe that if all the blood shed by the lancet during the first quarter of this century could have been collected, it would have made a very respectable Dead Sea." If this fashion forty years ago occasioned indiscriminate prescription to a degree which drenched the nation in its own blood, is it a very shocking assumption, even before we look at the facts, that the alcoholic fashion which has long ruled in its stead will also have caused indiscriminate prescription to an extent that has often injuriously soaked the lieges in the fumes of alcohol? That it actually did, let our graphic friend, Dr. Munroe, again testify:—

"A reaction took place in the profession. We gave up the lancet, as we found that people living in cities and towns were not always labouring under inflammatory diseases. What we are labouring under now is debility. Everything is debility now. We went to the other extreme; therefore brandy became the *elixir vitæ*—the sole panacea for all the ills that flesh is heir to. If a man were in collapse, brandy relieved him; if in the agony of colic, why brandy revived him; if life was burning out in fever, brandy cooled him; and if he was starved to death, why brandy warmed him. In fact, brandy was the pet drug of the 'pharmacopœia.' Everything else dwindled into obscurity. People took brandy for everything almost, and took it as Mrs. Partington did. That lady only took it under two conditions—when she was very poorly and when she wasn't. Well, we took to brandy to cure disease, and we had a noble man to follow as a physiologist; he gave the most brandy of any man that I know of. I believe he treated one gentleman with brandy every hour—a member of Parliament. He took above a gallon of brandy in a very short time. It is on record that he never finished the second gallon; I think the family had to go into black after that."

To kick at the charge of inconsiderate prescription is now a stage too late, and can only provoke a smile from all who have followed the recent siftings of the "toddy system"—as Dr. Todd's method has been facetiously called—from the disclosures of the *Saturday Review* last year down to the present period. The medical journals at that time did not bristle up at what was insinuated about the share of the result attributable to the family doctor; but, while duly allowing for his difficulties, frankly owned that it was but too true. It would be endless to cite the medical witnesses who have more recently testified the same thing. Dr. Prance, of the Plymouth Hospital, says of this medical use of alcoholics:—

"I cannot but think they have often been prescribed at random, and thoughtlessly, without reflecting on the responsibility attaching to medical order or sanction, and the tendency in such matters for the patient to take an ell where only an inch has been sanctioned. Especially, I think one of the most prevalent prescriptions a dangerous one, of brandy and water, or whisky, &c., for ordinary dietetic use by people of weakly stomachs, originating perhaps in the belief of the prescriber that the patient *will* have something of the sort, and the fear that he will perhaps get some adulterated wine, and will get more present harm therefrom. The result, however, I believe to be disastrous in the growing taste for something more and something stronger, until in many cases the craving becomes insatiable."

Mr. May, of Tottenham, referring to Dr. Gairdner's non-alcoholic treatment of fever, says:—

"So convinced am I of the truth of his views, that I would much rather trust myself to the *vis medicatrix naturæ* than to any physician who has imbibed the new and fashionable mode of treatment with ardent spirits, and forcing down nourishment, when under the influence of disease the digestive powers of the stomach are almost entirely suspended, thus adding to the oppressed system the burden and distress of undigested food."

One medical witness more we must here cite, the venerable Mr. Higginbottom, of Nottingham, who, during his singularly prolonged and honourable career, has had rare experience of all medical methods, and the moral courage to profit thereby. He says:—

"I was educated in the opinion that alcohol was absolutely necessary in the treatment of disease, and for the first twenty years of my practice I gave it to my patients, but for the last forty I have discontinued it altogether, not having once prescribed it as a medicine. As early as 1813 I discontinued port wine in typhus fever (the term typhoid was not come into use as a distinction at that early period), afterwards in English cholera, uterine hæmorrhage, delirium tremens, and in cases of exhaustion and sinking. In the year 1827 I had lost all confidence in alcohol as a medicine, from a conviction of its inefficiency, and also from its very dangerous qualities. It is not necessary to enter into the details of my practice, as I have given them to my medical brethren in the *Lancet* and *British Medical Journal*. In August, 1862, I had a paper read before the British Medical Association, in London, on the non-alcoholic treatment of disease."

This is surely the manlier part for the profession to act, instead of testily wincing under a sense of offended consequence. There is a nobility of sentiment in some of these professional avowals which will conciliate far more respect to the profession than will be conceded to mere airs of assertive dignity. "I feel every day I live," says Mr. Gunn, Surgeon to the 99th Regiment, "that we in the profession have much to account for, and I make this honest confession to-night [at the late meeting in Exeter Hall], that I fear I have prescribed more alcohol than I should have done." Mr. Gunn interestingly adds:—

"How many have I seen in the camp of Aldershot attending our prayer-meetings who have repeatedly said that the first step they had taken in the path of religion was in joining the total abstinence society. As regards myself,

I may add that I felt I could no longer say, 'You must abstain,' whilst at the same time I was not a teetotaler myself; but now I can look them in the face, and say, too, that I am a total abstainer. The consequence is, that we have already over sixty joined us within the last fortnight. I have been in the regiment some time, but until the other day I never had the pleasing incident of a noncommissioned officer coming to me to ask if we could not get up a Bible-class. Was it among the drinking men? No; but among the sixty men who have become total abstainers."

Dr. Munroe, on the same occasion, said:—

"I believe I have made many drunkards, not knowingly, not purposely, but I recommended them to drink. It makes my heart ache, even now, to see the mischief that I have made in years gone by, mischief never to be remedied by any act of mine. But in this respect at least I do not sin now, and have not done so for the last ten years. I do not take intoxicating drink myself, and I do not have it in my house, and I do not give it to anybody else."

One more instance of this higher sentiment, which we rejoice to believe is not rare in the medical profession, we cull from a paper by Mr. May in 1869. In this he describes the effects of the alcoholic method on "an influential person" under his care. She improved, but continued to take the brandy; and by and by fell into that dreadful snare, the nightly use of opiates. Having tried in vain to get her to give up both, Mr. May withdrew from the case; but matters growing worse, he was asked back, with a *carte blanche* as to treatment. He then proceeds to say:—

"I must now state that in former days I had found my patient's conversation of quite a religious and instructive character; but now all was changed, and a serious word was repelled by the query, 'Can't you get rid of this dreadful sinking?' 'Can't you give me some rest at night?' The state of the mind and body was most pitiable. I recommenced my attendance by saying I could only undertake it on one condition, that brandy should be entirely and at once discontinued, and opiates by degrees. I knew my patient, who was really a religious person, had been unwittingly led into this sad condition, and that I, by sanctioning the little in days past, had helped to do the mischief. This induced me to confess my fault, and to express my belief that by seeking help from above she would be enabled to surmount the cause of her misery. She did so, and in three or four days the distress became less severe. She became a total abstainer, gradually discontinued her opiate, and a sweet serenity of mind and enjoyment of Christian conversation was restored. She, in fact, became in her 'right mind,' and remained so for about two years, when she died in a good old age, a bright example of submission to the Divine will under a very suffering malady."

When the medical profession have so spoken, it is hardly needful to cite the testimony of the general press. The *Times* of January 4, while glad that Mr. Gilbey, the wine merchant, by his statistics, has, on the matter of alcohol consumption, "put us in better humour with ourselves" (though this is entirely owing to the fact that the *Times* has, in its haste, strangely misunderstood Mr. Gilbey), accepts this medical testimony to the need for increased caution both by the profession and by the public, as most

significantly true, all "protests and dissents" notwithstanding, which "allege that this or that individual cannot see what almost everybody else sees and knows." The *Saturday Review* says:—"It is impossible to deny that the doctors, as a body, have made themselves responsible for a certain share of the mischief. Their sins in this respect have been sins both of omission and commission, and their reticence has perhaps been more injurious than their prescriptions. They have encouraged the use of stimulants, not only by administering them somewhat too freely in particular cases, but also by neglecting to challenge or rebuke undue indulgence with sufficient plainness of speech when it came under their notice." "It has long been whispered about," says the *Standard*, "that a new vice was creeping into upper and middle class society; that, under cover of medical sanction, people of both sexes, from whom such conduct would not have been anticipated, were slowly acquiring habits pretty closely resembling intoxication." The *Pall Mall Gazette* styles those who complain of the opening paragraph of the Declaration "hypercritical writers," and affirms that "although there are those who express indignation at the assumption that alcohol is ever prescribed inconsiderately in large quantities, or that sufficient care is not always taken to cut it off at the right moment and to arrest subsequent habits of induced tippling, there are too many well-known examples of habitual evil induced by medical prescription to make us hesitate to accept the Declaration in its every word and in all its meanings."

The *Spectator* says: "It is certain that the late Dr. Todd, a man of inquisitive genius, aware that the old system of starvation was erroneous, sometimes tried heroic doses of alcohol; and we ourselves have heard in three separate cases of very extravagant prescriptions." The writer, while crediting doctors with prescribing alcohol conscientiously, affirms what cannot be gainsaid, that too many nevertheless yield to the temptation of prescribing according to the humour of the patient. Mr. Winskill, whose domiciliary experience as a Temperance missionary at Warrington makes his testimony as weighty as it is strong, says, in a letter to the *Temperance Record*:—

"After a systematic house-to-house visitation of nearly the whole of this borough, comprising over 5,000 houses, and a population of 30,000, I have no hesitation in saying that one of the greatest causes of declension from the temperance ranks is the indiscriminate prescription of alcohol by our medical men, some of whom seem to think that it is a panacea for all the ills that flesh is heir to. About 3½ per cent. of our population are life abstainers, and about three-fifths of these are from sixteen to sixty years of age, and I am grieved to have to say that there are numbers of respectable and intelligent persons who, although they were, up to twenty years of age or to the time of marriage, life abstainers, as soon as they became nursing mothers or out of health, were induced by their medical advisers to partake of that artificial stimulant alcohol; and thus many a home has been blighted, numbers of useful workers lost to the cause, and much harm done to them, their friends, and to society at large."

One correspondent—able, fearless, and experienced, and wielding a free lance—has stepped into the arena—Dr. Gully, of Malvern. He knows not “whether to be more amazed or amused at the audacious character of the document proceeding from the names attached to it,” as having some of them subjected to alcoholic treatment patients that subsequently found their way to his hydropathic establishment. We would suggest a third alternative sentiment, that of feeling *gratified* that the “names” referred to should have come to see and do the right thing at last. He then quotes a protest he had made nine years ago in a work he then published against “this vice of practice and its results,” which, we need hardly say, is most thoroughgoing and sound. He further says:—

“The ‘distinguished’ man in London and his humble imitators have to answer for a vast amount of tippling in well-dressed and well-housed families. In far too many of such families there arises the accusing vision of some gentle, hysterical girl transformed into a coarse drinking woman by the prescription of her doctor, ‘to steady her nerves’; of some mother in middle age, with all the shakiness of nerves accompanying that period of feminine life, setting the example of glasses of sherry all the day long to her sons now rising into early manhood; of some hardly-worked father who goes fuddled to bed each night because the doctor tells him he ‘requires support’ after the labour of the day, as if there was any *real* restorer of the power, save blood-making food and nerve-saving sleep.”

These are “round mouth-filling” denunciations, which we leave to our readers to digest as they please or may; but since the battery has opened, let us hear a little more.

“At one time, some twenty years ago, this alcohol treatment was mostly confined to what are called ‘nervous’ complaints; but now, have you rheumatism or gout (and a favourite slang is that every one has ‘gout’), you must drink cold whisky punch two or three times a day; have you chronic bronchitis, you must swallow hot sherry-and-water; are the kidneys wrong, down go the hollands and the brandy; and even have you congested brain, you are told to ‘strengthen’ it by the stimulation of champagne and sparkling hock.”

Dr. Gully then closes with another hit at the subscribers to the Declaration for their “coolness,” though accepting the deed as a token of amendment, and with the following slap on the cheek of the testy and dignified dissentients:—“For the rest, it needs no list of doctors to rise up and tell us that alcoholic stimulation is bad, but it does require a ‘forty-parson power of hypocrisy’ to declare that they are as innocent as lambs of any provocation to it in their dietetic prescriptions.”

We have no space left for touching on the medical points that came up in the course of the recent correspondence. How Mr. Skey’s debility argument has been met by Dr. Wilks we have already seen. The current phrases of “*supported*,” “*nourished*,” “*kept up*,” and the like, are, as Dr. Gully remarks, “applied by ignorance to the process of the most rapid consumption of vital

power." One fact may be noted, out of thousands more, that flatly confutes all such fallacies. Prisoners who, when locked up, have almost everything in their habits, antecedents, irregular living, poor feeding, and solitary depression to call for the "nourishment" of alcohol—if in alcohol such nourishment there be—are discharged almost invariably in a condition more healthy and robust than when they entered, without having tasted alcohol, and for the very reason that they have not tasted alcohol.

One point more demands a word from us before we close, considering the eminence of the disputants, and the interesting character of the point itself, as lying on the advanced line, or debateable land, of pending alcoholic investigation. In a letter to Dr. Anstie, in the *Practitioner* for February, Dr. Parkes, in defending the "Medical Declaration," alludes to the alcoholic investigations in which both had been engaged, and to Dr. Anstie's theory that up to a certain point (one and a half ounces), which might be regarded as the limit of "moderation," alcohol was a dietetic, and beyond that an intoxicant. Adopting this "as the limit of the proper dietetic amount," Dr. Parkes thus uses it in defence of the Declaration:—

"This would be contained in one and a half pints of beer with five per cent. of alcohol, or in fifteen ounces of claret with ten per cent. Now, is it not quite correct to say that most men would consider these quantities absurdly small; that they not only take far more than this, but consider that it is necessary for their health and for the due performance of their work that they should do so? If this be the case, and I think you would not deny it, surely the framers of the Declaration were fully justified in the assertion that the public 'immensely exaggerate' the use of alcohol as an article of diet."

The argument is irresistible, and Dr. Anstie leaves it unanswered. To bring it into bolder relief, we add the following query of Dr. Bowen, at the late meeting in Exeter Hall:—

"The common use of alcoholic liquors by the people in the present day is so free a use, that I wonder, if this condition of things is to go on, what is to be the medical dose or the medical use! It puzzles me to know how large the dose will be in a few years to come. The people are already using such large doses themselves, that by and by it will be something like taking a bottle of physic at once."

Another and more interesting point still, or rather the same point in its fundamental aspect, is Dr. Anstie's distinctive theory of the conversion, up to a certain limit, of alcohol in the body. After showing that the Declaration makes no reference to this point whatever, Dr. Parkes thus proceeds:—

"With regard, however, to destruction of alcohol in the body, I admit at once that the experiments of Schulinus, yourself, and Dupré have rendered it very probable. I do not think we can say it is *proved*, in the scientific sense of the word, until the quantitative determination of the amount of exit from the skin and lungs is far more complete. But even if the complete destruction

within certain limits were quite clear, this fact alone would not guide us to the dietetic value of alcohol. We have first to trace the effect of that destruction, and learn whether it is for good or for evil. You seem to think that the destruction must give rise to useful force, but I cannot see that this is necessarily so. We require to know more precisely the effect on the elimination of carbon and on the tissues and their functions, before we decide on the true action; so that my belief is, that we must at present judge from those effects which we can trace, and not from a single fact which is not yet really more than highly probable."

These positions Dr. Anstie replies to, stoutly contending that he has fairly established his theory. Of nothing, however, are we more certain than that Dr. Parkes's demur to this conclusion is thoroughly well grounded, and we await with confidence the result of more ample investigation.



## THE RED RIVER EXPEDITION.\*

NOTWITHSTANDING the somewhat large experience which has been acquired, showing by the force of many examples that intoxicating drinks are altogether useless to enable men engaged in hard manual labour, involving much wear and tear of the system, to get through their work with any greater ease or with less fatigue, the opinion is by no means exploded that when men are called upon to put forth extraordinary and unusual physical exertion under circumstances of more than usual hardship, then the use of spirits in some form or other is beneficial, if it be only as a spur or incentive for the time. This idea appears to us to be so fallacious, and not to have any sound basis in reason or philosophy, we cannot but wonder that it should linger in the minds of intelligent persons, and that those whose duty it is to provide for the necessities of our soldiers and sailors should still continue to freight our men-of-war with rum rations, and establish a canteen wherever the British soldier may be stationed.

As the absence of intoxicating drinks from a ship or the line of march has always been found to result in a diminution of crime, with increased health and subordination—while, as is the case with civilians engaged in severe toil, the work is performed with greater cheerfulness, with more spring and vigour, and with less of resultant depression and wear—we trust that those in authority

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\* "The Red River Expedition; by] Captain G. L. Huyshe, Rifle Brigade, late on the Staff of Colonel Sir Garnet Wolseley." 8vo. Macmillan & Co. 1871.

will not only be induced to countenance and assist every effort to spread temperance among the men, but will discontinue the practice of serving rations of spirits, thus almost enforcing the consumption of alcohol, and in lieu thereof issue abundant supplies of more wholesome and non-intoxicating beverages.

The very interesting work named at the head of this article has led to these observations, containing as it does most valuable testimony to the advantages accruing to the British soldier by the withholding of spirit rations under the most trying circumstances. We must refer our readers to Captain Huyshe's graphic descriptions if they wish to obtain accurate ideas of the nature of the country through which travelled the force of 1,200 men (one-third of which were regulars, the others being militia of the Dominion of Canada), sent from Toronto in the spring of 1870 to quell the rebellion which had broken out on the Red River Settlement, a distance of about 1,200 miles. A *good* map might give some idea of the route, but suffice it to quote Captain Huyshe's statement, that to accomplish the journey "it was necessary that all the means of progression known to the human race (except that of balloons!) should be made use of." "The latter 600 miles from Lake Superior presented the greatest difficulties, as the route passed through a wilderness of lakes and rivers traversed only by the Indian in his birch-bark canoe, and never hitherto attempted by any boat of European construction." The difficulties of the route consisted in the numerous rapids with which the rivers were beset, the boats having with great labour to be poled or tracked up those that were at all practicable, and at other spots where the waters were too furious, or the rocks rendered either of these modes of travelling unavailable, everything had to be unshipped and carried on the backs of the men up or around a "portage" (as a track through the wood or over the rock made to avoid the falls is called), while the boats had to be dragged by manual labour; one of these portages is mentioned as being "a mile in length, for a portion of which distance the boats had to be hauled up a rocky hill by sheer strength at an angle of 45°." "The men had been almost constantly wet through—drenched to the skin by rain and wading up to their waists in the river." Some of the men were engaged in the heavy work of cutting a road through the woods and of preparing it in a rude fashion for the passage of men and stores where the rivers were not navigable. "The labour gone through by the troops at this trying period was most excessive, but Colonel Wolseley, who was in command, thus writes of the 60th at this time: 'The men and officers have worked in a way that I have never seen soldiers do before; they are all as cheery as possible, and seem to enjoy the life, which is, assuredly, no easy life.'"

The mode of portage described by Captain Huyshe conveys a good idea of the severe duty imposed upon the men by the necessities of the route. He says:—

“The plan we adopted, and by which we found that the greatest amount of power could be got out of our crew, was as follows:—Four men tied their portage straps to the tow-line, two and two, the other four tied theirs to the seats of the gig, two on each side, at the stem and stern, to keep her on an even keel; the tow-line (made of four-inch rope) was fastened to a hole made in the keel of the gig near her fore-foot, which enabled the men pulling in front to lift her nose over the skids; then, with a ‘yo-heave-oh,’ all pulled together with a will, each man doing his utmost. It was hard work even with our light gig with only eight men; but some of the large heavy boats required thirty or forty men to get them up steep places. This ‘Height of Land’ portage was very trying to the men, some of the boats having no less than twenty-three or twenty-four barrels of pork in them, besides other provisions in proportion, and the labour of going backwards and forwards so constantly with heavy loads was very severe.

“Some of the brigades were two and three days getting over this portage, working from morning to night, and the excessive severity of the labour began to tell upon the men. The way in which all ranks worked, officers and men alike, was beyond all praise. The officers vied with their men in carrying heavy loads, and, apart from the respect with which the officers were treated, a stranger could not have told an officer from a private. Their dress was much the same; sleeves rolled up to the elbows; arms, neck, and hands as brown as berries; loose flannel shirts open at the throat, a pair of very dirty duck trousers, tucked into mocassins, and a straw hat or red woollen nightcap to crown all; little remnants of uniform to be seen anywhere, except occasionally an odd forage cap or two. The men had in most cases patched the seats of their trousers, which soon got worn out by continual rowing, with pieces of canvas from empty biscuit bags or flour bags, and presented thereby a most comical appearance. Up early, hard at work all day, rowing or portaging, from five a.m. to eight p.m., with a short interval for breakfast and dinner, nothing to eat but salt pork and biscuit, nothing to drink but tea, they yet looked as healthy and cheery as possible; and when they reached Fort Frances there was not a sick man amongst them—they had no time to be sick.”

It is interesting and important to notice here the dietary upon which this heavy labour was sustained:—

“The scale of daily rations laid down for the troops, officers and men alike, was as follows:—1 lb. of biscuit, 1 lb. of salt pork, 1 oz. of tea, 2 ozs. of sugar, one-third pint of beans, or one-quarter pound of preserved potatoes; and on these the men did as hard work as has ever been done by the men of any army. The meat ration was undoubtedly rather meagre for men doing such hard work, and one pound and a half per day would not have been too much. But as the troops had to pass through a dreary wilderness of rocks, trees and water, where no supplies of any description (except a few fish) could be procured, and as every ounce of food had to be carried on their own backs, an addition to the meat ration would have caused a very considerable addition to the weight to be carried over the portages, and therefore a delay to the expedition. The men were constantly wet through, wet sometimes for days together, thoroughly done up by the severe labour of rowing, poling, tracking and portaging; yet they were always well and cheery, and never seemed to feel the absence of spirituous liquors. This fact speaks for itself. *I trust that the time has come when the issue of a spirit ration to a British army in the field will be for ever*

*totally abolished.\** The men do not want it, they are better without it, better in every way. Throughout the Red River Expedition the absence of spirituous liquors was marked by an almost total absence of crime, as well as by the wonderful good health and spirits of the men.

"I do not hesitate to say that, had a spirit ration been issued, the results would have been very different. Take the case of trappers and lumberers in Canada—men who do harder work than any other class of men in the world; they live on bread, pork, sugar, and tea. If any one doubts the severity of the work they perform, let him take an axe and chop down trees for ten minutes, and he will find that even in the coldest weather the perspiration will pour from him. Lumberers will tell you themselves that they had rather not have whisky when they are chopping in the woods, and these men are no teetotalers; as soon as they get back to their homes, they get drunk on whisky. I know of an instance in the Crimea where a fine young fellow, a promising young sergeant, was tried by court-martial, and broken for being drunk in the trenches, and it was proved at the court-martial that he had drunk nothing but the double allowance of spirits which was at that time issued to our men. Can anything be stronger evidence than this of the positive evil of the spirit ration? How many men, too, in the Crimea, were tried for getting at the keg of liquor in the trenches, which always had to be kept under a sentry, and was a constant temptation to the men and to the sentry himself? I admit that, in a country where fuel is scarce, it is difficult always to get wood to make the fire necessary for tea; but this should be provided by the Commissariat, and the money and transport saved by the absence of liquor would go a long way towards supplying the fuel requisite for the tea. There is nothing that is so refreshing when a man is thoroughly wet and tired as a good warm cup of tea or coffee: it is fifty times as good as brandy, rum, and whisky. The latter only warm you up for a time, and leave you colder than ever; but the effect of tea or coffee lasts much longer and leaves no vacuum behind it. There may be medical men in our army who would oppose the non-issue of spirits; it was so with the Red River Expedition: some of the medical men asserted that it was a mistake—that it would never do, but the result was a most perfect triumph for tea; and should the same system ever be tried, as I hope and trust it will in the next European war in which England has to engage, I feel confident that the result would be the same. Not a man of the Red River force touched a drop of alcoholic or fermented liquor the whole way from Shebandowan to Fort Garry, except he was ill, and received it from the store of medical comforts; and there was positively no sickness, and a total absence of crime, combined with the utmost cheerfulness and good humour, while the work performed stands wholly unrivalled for its unusual nature as well as its severity. The men soon get reconciled to the absence of liquor, and appreciate the value of tea as a substitute, as the following anecdote will show. One day we were hauling our boat over a portage; it was the middle of the day, and very hot, the portage was steep, and it was hard work. Some of the Colonel's crew of Iroquois came up to help us, to my great delight, for we were pretty well done, when a sudden jolt of the boat splashed up a little tea out of a big can that was in the stern-sheets. 'Let's stop and have a drink,' said some one. No sooner said than done. The big can, which held a couple of gallons, was soon emptied, though the tea was quite hot. The men crowded round, fearful lest they should be too late to get a drop; had it been beer or whisky they could not have shown a greater anxiety, or gulped it down with more satisfaction. 'By Jove! that's capital—puts new life into one,' said one of my crew, a 60th man. 'Yes,' I replied, 'better than all the beer in the world.' 'Well, sir, I really think it is,' was his answer—and so it was. In hot weather, cold tea is a most refreshing and stimulating beve-

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\* The italics are ours.—Ed.

rage; and in cold or wet weather, who has a word to say against a delightful cup of warm tea?"

Captain Huyshe's testimony is fully borne out by that of his commanding officer, Colonel Wolseley, who again writes: "The absence of any spirituous liquor, as part of the daily issue, is marked by the excellent health and spirits of the men; and I may add, by a remarkable absence of crime"; well may the Captain exclaim, "Great praise indeed, coming from one so well qualified to judge!"

The object of the Expedition having been successfully and peacefully accomplished, the return journey had to be undertaken, and once more the rapids to be tracked, the portages to be passed and the rivers traversed, but the weight of stores was of course lessened by the food which had been consumed, and the artillery and ammunition left behind at Fort Garry. The time occupied upon the expedition was five months, and notwithstanding the very exceptional nature of the labour, extending over fifteen hours per day, in the midst of water from rain above and rivers below, no accident occurred, and not one single life was lost. In the journey out from the point of debarkation on the western shore of Lake Superior and on the return to that point, upwards of 1,200 miles were traversed through a wilderness of pathless forest, of roaring and foaming rivers, or of lakes on whose waters the boats of the white man had never before been borne. The following extracts from an order of the day issued by Colonel Wolseley, on the successful termination of the labours of the men, and before their return, will show the opinion held by that officer of the nature of the work. He says: "You have endured excessive fatigue in the performance of a service that, for its arduous nature, can bear comparison with any previous military expedition. Your labours began with those common at the outset of all campaigns—namely, with road-making and the construction of defensive works; then followed the arduous duty of taking the boats up a height of 800 feet, along fifty miles of river full of rapids and where portages were numerous. From the time you left Shebandowan Lake until Fort Garry was reached, your labour at the oar has been incessant from daybreak to dark every day. Forty-seven portages were got over, entailing the *unparalleled exertion of carrying the boats, guns, ammunition, stores, and provisions over a total distance of upwards of seven miles.\** It may be said that the whole journey has been made through a wilderness where, as there were no supplies of any sort whatever to be had, everything had to be taken with you in the boats.

"It has rained upon forty-five days out of the ninety-four that

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\* The italics are ours.—ED.

have passed by since we landed at Thunder Bay, and upon many occasions every man has been wet through for days together.

“There has not been the slightest murmur of discontent heard from any one. It may confidently be asserted that no force has ever had to endure more continuous labour, and it may be as truthfully said that no men on service have ever been better behaved or more cheerful under the trials arising from exposure to inclement weather, excessive fatigue, and to the annoyance caused by flies. There has been a total absence of crime amongst you.”

The experience of the Expedition abundantly confirms the wisdom of the officers who organised the force in determining rigidly to prohibit the use of any alcoholic rations of any kind. To this prohibition must doubtless, to a large extent, be attributed the entire absence of crime amongst so large a body of men whose march endured not less than five months under circumstances, it may be imagined, not the most conducive to strictness of discipline or oversight; while the tissues of the body, not being deteriorated by alcoholic rations, were enabled rapidly to assimilate the wholesome food with which the men were supplied, and thence to derive the force necessary for the unwonted and long continued labours. This remarkable experience furnishes a striking illustration of the advantages resulting from total abstinence, which it is to be hoped will not be lost at the Horse Guards, nor overlooked by the Medical profession in their dealing with those called upon to put forth more than usual exertion, and under very exceptionable circumstances—circumstances such as have far too often been supposed to be exactly those which would warrant, nay, would call for, a liberal supply of the means of alcoholic stimulation.

The General Order issued in November, 1870, by His Royal Highness the Field-Marshal Commanding-in-Chief does the Expedition no more than justice in saying: “Seldom have troops been called upon to endure more continuous labour and fatigue, and never have officers and men behaved better or worked more cheerfully during inclement weather and its consequent hardships, and the successful result of the Expedition shows the perfect discipline and spirit of all engaged in it.”



## REPORT OF AN AMERICAN BOARD OF HEALTH.

ALL schemes of sanitary reform which do not include the prevention of the evils caused by intoxicating liquors, fail to deal with the most powerful cause of physical and social evil. It is, indeed, little better than mockery to speak of imperfect sewers, badly constructed houses, defective ventilation, deficient supply of good water, adulteration of articles of diet, and to ignore one of the greatest of all causes of preventible disease—the common use of drinks containing the narcotic poison alcohol. We are therefore glad to find that one Board of Health has not altogether forgotten to inquire into the effects of alcohol. We have now before us the second Annual Report of “The State Board of Health of Massachusetts.” It appears that the law under which this Board of Health is established requires the Board “to examine into and report what, in their best judgment, is the effect of intoxicating liquors as a beverage upon the industry, prosperity, happiness, health, and lives of the citizens of the State.” To carry out this enactment the Board of Health proceeded to obtain information. A circular was sent to the American Ministers at foreign courts, and to the Consuls of all the principal ports of the globe. The replies to this circular throw a good deal of light on the various intoxicating liquors used in the different countries, as well as on the evils caused by drinking. The reply from the Netherlands contained a statement, signed by six hundred physicians, as to the effects of strong drink, which is so explicit as to the influence of alcohol upon the human body, that we give it in full, that our readers may see that there are in other countries, as well as in America and England, medical men who are willing to tell the truth respecting alcohol. These six hundred physicians say:—

“1. The moderate use of strong drinks is always unhealthy, even when the body is in healthy condition. It does not do any good to the digestion, but even interferes with that process; for strong drinks can only temporarily increase the feeling of hunger, but not in favour of digestion, after which strong reaction must follow, and evils which are usually attributed to other causes, but often result from the habitual use with moderate drinkers.

“2. The assertions that intoxicating drinks used moderately are naturally innocent means of cheering up—that they are useful in severe colds—or that they are with labouring men equivalents for insufficient nourishment—or useful in misty and humid air—or for people obliged to work in the water—or a protection against contagious diseases—are without any foundation, and contradictory to experience and to human reason; and the habitual use of the same has therefore an unhealthy effect, and an influence unlike what people expect from them.

“3. The habitual use of strong drinks works most perniciously on all diseases, and especially on consumption.

“ 4. Regarded as the usual drink of all classes, they are not only improper on account of the above reasons, but also against moral development and material prosperity, in such measure as to be considered and to be stamped as the greatest underminers of the actual welfare of mankind.”

This statement is far in advance of the well-known Medical Declaration of our leading physicians, and we must wait the further progress of scientific investigation before the profession in this country will issue such a document. The Board of Health of Massachusetts also sent circulars to correspondents in various parts of that State. One hundred and sixty-four medical men sent answers to the question, “What has been the effect of the use of intoxicating liquor, as a beverage, upon the health and lives of the people in your town, or in the region in which you practise?” There was considerable difference in the answers to this question; but the great majority denounced the use of intoxicating liquors. These replies have been classified as follow:—

“Very destructive to life and health	...	...	...	...	48
Injurious in a greater or less degree	...	...	...	...	49
Public health not affected by use in their towns	...	...	...	...	16
The people of their towns very temperate	...	...	...	...	27
Intoxicating drinks not used in their towns	...	...	...	...	5
The effect is bad upon foreigners in their towns, but not upon natives	...	...	...	...	4
Useful in the decline of life	...	...	...	...	1
Use promotes longevity	...	...	...	...	1
Indefinite replies	...	...	...	...	13

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We are pleased to find that the delusion as to the usefulness of alcohol in old age found only one supporter. It is really strange that any medical man should still hold such a ridiculous notion. We suppose he must be living in some out of the way place where he has not the opportunity of seeing how well the practice of total abstinence agrees with the aged. In all parts of England we may see old teetotalers who clearly demonstrate the fact that whoever may require alcohol, the old do not. Another medical man gave it as his opinion that the use of strong drink promoted longevity. Of course he furnished no evidence in support of this notion; in fact, statistics prove the reverse to be true. We fear that in America, as well as in this country, there is a tendency to exercise the imagination rather than the reason. Dr. Tyndall has published an eloquent discourse on the use of the imagination in science. Some other orator might make the use of the imagination in medicine an interesting subject. The extraordinary virtues ascribed to alcohol are, if we mistake not, the production of the imaginative faculty; they are certainly not the consequence of scientific investigation. Many of the replies

to the question of the Board of Health were evidently the result of extensive observation and serious thought: they carry on their surface evidence of their truthfulness, as the following brief extracts will show:—

“Observation has satisfied me that the use of intoxicating liquors as a beverage does not improve the physical or mental system, but is adverse to the best condition of both.”

“Intoxicating liquor has invariably proved a curse to those who used it as a beverage.”

“Injurious wherever habitually used. Has destroyed many lives in the fifty years of my observation.”

“Intoxicating liquors have greatly injured the health and lives of those who use them habitually as a beverage.”

“The use of intoxicating drinks has been, so far as I can judge, only productive of evil, and he who uses them has need to say often the prayer of St. Chrysostom, ‘God keep my body from the doctors, my money from the lawyers, and my soul from the devil.’”

“The effect of the use of intoxicating liquor is here, as everywhere, injurious to health and destructive to life. Never useful as a beverage, and seldom, if ever, as a medicine.”

“Intoxicating drinks have injured health and shortened life in proportion to their use.”

“Intoxicating drinks have a decidedly injurious effect upon life and health, and are far too much used in the treatment of disease.”

“The effect of the use of intoxicating liquor has been to ruin health and shorten the lives of the people.”

“Predisposes to fever and rheumatism, and shortens life very decidedly.”

“Injurious always from first to last.”

“Impaired health, shortened lives, feeble offspring.”

“The cause of much debility and disease.”

“Better health and longer life would have been secured had the population abstained entirely from the use of intoxicating liquors as a beverage.”

“It has been and still is injurious to the health of the individual, to the health and happiness of his family, and to the treasury of the town.”

“Intoxicating liquors kill more than all diseases.”

“My impression is, that the use of intoxicating liquor as a beverage not only exercises a very pernicious influence on the moral and social condition of the people, but undermines health and shortens life.”

“We have little intemperance, but it is found to be invariably destructive to health and life. Moderate drinkers suffer from the habit when attacked by ordinary diseases.”

“All cases of *gangrene senile*, which have come under my observation, have been persons accustomed to indulge in strong drink.”

It will be seen from these extracts that the profession in Massachusetts are generally alive to the evil effects of alcoholic beverages, but there are exceptions; some still cling to the old errors as to the innocuousness, or even usefulness, of alcoholic liquor in moderation. There is also the same difference of opinion in this country; indeed, we do not expect to find perfect unanimity of opinion on medical any more than upon other subjects depending upon observation and reasoning. We differ greatly in our intellectual powers, and none of us are infallible; but we

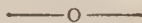
think that there is a preponderating mass of evidence as to the uselessness and noxious effects of alcoholic beverages. One great cause of the discordant views of the profession respecting alcohol is, that some have *investigated the practice of abstinence* not only by observing its effects upon other persons, in health and disease, but by trying the experiment on themselves. Others of the profession have gone on in the old way, taking these liquors themselves, and prescribing them to their patients, without taking the trouble to ascertain whether they are required either in diet or as medicine.

The Massachusetts Board of Health state in their report that, "Every member of this Board, and indeed every citizen, knows that intoxicating drinks are the direct cause of a very large proportion of all the crime which is committed amongst us." It is the same in this country: on every hand we may see poverty, disease, and crime caused by the use of alcoholic liquor. But our Boards of Health do not attempt to deal with alcohol. They try to remove other causes of evil, but the cause of intemperance they do not grapple with. How is this to be accounted for? The evil is apparent, no one disputes its existence; why then is its removal not included in the programme of sanitary reform? Is it the magnitude of the evil that deters our Boards of Health from trying to remove intemperance? Or is it for want of some tangible plan for accomplishing the object? To us it appears impossible to eradicate intemperate drinking in any other way than by the disuse of liquors containing alcohol. But this is such an extreme measure, so opposed to all the prejudices and habits of the people, that all other schemes for the purpose seem more popular than the radical remedy of teetotalism. The Massachusetts Board of Health in their report say they can suggest no specific remedy; but they recommend the Legislature to suppress dram-shops and tippling-houses throughout the State; and as the love of strong drink in some persons becomes a real disease, they urge the establishment of inebriate asylums similar to the asylums for other forms of insanity. In both these ways the Legislature may do something to mitigate the evil, although not to cure it. The alteration of the licence laws in this country may, in some slight degree, diminish intemperate drinking; but in the present state of public opinion it is not likely we shall have effectual legislation, for the love of strong drink is too deeply rooted to be banished by Act of Parliament. In fact, our legislators themselves have the same opinions and habits as the rest of the community, and are not likely to make laws which would effectually prevent the consumption of intoxicating drinks. The fact that the drink is unnecessary is not yet recognised by our public men, and the old error of supposing that the evil arises

from men abusing the drink is still in full force. The origin, the progress, and the establishment of the habit of intemperate drinking is not studied; hence there is a disposition to adopt any plan for correcting the drinking habits of the people rather than the only effectual one of total abstinence from the whole family of alcoholic liquors. It is left, then, to the friends of temperance to make known the facts that all intemperate drinking is caused by the cumulative action of alcohol on the nervous centres—that alcohol is altogether unnecessary as an article of diet, and seldom, if ever, required as a medicine.



## Miscellaneous Communications.



### ANOTHER MEDICAL MEETING IN EXETER HALL.

A SECOND meeting, addressed exclusively by members of the medical profession who are total abstainers, was held in Exeter Hall on Tuesday evening, 30th January, under the auspices of the National Temperance League. The hall was completely filled by an enthusiastic and attentive audience. The chair was taken by Mr. SAMUEL BOWLY, President of the League.

The first speaker was Mr. ROBERT SLEMAN, F.R.C.S., of Tavistock, who, after some introductory remarks, said: About forty-four years since I attended the borough hospitals. There was one fact which was impressed upon my mind very strongly, which was this: that in some cases of severe injury, and in other cases not in themselves severe, the doctrine laid down by our teachers was this—that in consequence of the past conduct of the patients the treatment was obliged to be different; in consequence of their taking alcoholic drinks the greater was the difficulty of curing them, for reasons which I hope my friends who are to follow will enlarge upon for the benefit of moderate

drinkers—I am speaking now to those who are “moderate,” according to Dr. Anstie’s notion, which is that “any one who exceeds two glasses of wine is physiologically intemperate.” It is very difficult to treat disease of itself in many cases; but we have in moderate drinkers superadded to the nature of the disease the effects of their having taken these alcoholic drinks, and we cannot tell what influence they have had upon their system. Disease of the heart may have been produced, even in one who may have been what the public calls “a moderate drinker.” But take my advice as an old man, and don’t take physic unless you really want it. I have been a poor-law surgeon about, I think, thirty years. I had for eleven years to attend a large district of 47,000 acres, the population being about 5,000, with the enormous salary of £43 per annum! I since that have attended a larger district for nineteen years, with a larger population, and the whole expenditure by the rate-payers in alcoholic drinks for the paupers during that period has been the large sum of 2s. 6d. I have been

a workhouse surgeon for about nineteen years, and during the first sixteen years of that time not one farthing was charged to the ratepayers for alcoholic drinks. I used other stimulants in most cases—I don't say in all, because now and then I have given brandy in amputations and in certain other cases; but I have given it myself—did not leave it to the nurses—and have watched the results. These cases were not cases which would justify me in giving alcohol in any other way, or to any of you, unless you wanted your arms or legs taken off. In operations chiefly, and in confinements in a few cases only, have I given it; but then I have had this difficulty: The hospital required to be enlarged, but the guardians did not like to be “throwing away expense,” as they said, though they don't always study economy, and don't know the value of a good hospital. When I urged the enlargement of the hospital I was met in this way: “Have not the patients suffered more from want of stimulants than from want of air?” Well, a charge of that sort, circulated in a provincial paper, was not easily met, because my hands were tied, and I could not discuss the matter in the press. Well, I bore with that, and in course of time I found that they wanted to break down my teetotal principles. Mind, they were then saving, as compared with other unions, £100 a year. They attempted to introduce, and did introduce into the workhouse stimulants. I said, “If stimulants are to be introduced, let me be the introducer.” They knew full well that in the same county a smaller workhouse was spending £77 a year upon alcoholic drinks. They knew I was their master, and they threatened to cut down my salary. An appeal was made to the Poor Law Board, and they were compelled to give in. Under these circumstances, I gave stimulants, but I cannot say that I gave them with any advantage to the patients. I took care to have the nurses' reports, and asked the patients what was the effect of the stimulants upon them. Twelve received these stimulants; six of them were about

seventy-five years of age; five of them are living now at this day, but have had no stimulants for a long time; they average seventy-eight years and six months in age. Stimulants were given to the nurses, who had not been in the habit of indulging freely. However, the stimulant question is now at an end as far as I am concerned. I don't treat acute cases with stimulants at all, and now I will tell you the result, in the house and out of the house. I was sent for one night to amputate the leg of a young man who had sustained a compound fracture; I was sent for by a physician to bring instruments four miles from my residence. I examined the leg, and removed several loose fragments of bone at the fracture, which was near the ankle-joint. There had been a good deal of hæmorrhage. I said to the physician, “I shan't amputate in this case.” He said, “Why not?” I replied, “I'll give the man a trial: he's young yet.” That leg was saved. The man had no stimulants, and instead of the guardians having to provide him with an artificial leg, or maintain him for life, he is now getting his own living. I was called to another case, in an opposite direction—a much more severe case. A boy was severely injured. I was requested to bring my amputating case. I went, and found the soft parts very much injured, and I knew mortification must take place. And there was this complication—viz. that the fracture had extended into the knee-joint; I don't mean to say that there was a compound fracture of the knee, but the fracture had extended to where I say. I said to the surgeon, “He's young yet.” I saw that sloughing must take place, and sloughing did take place. That young man is now working and getting his living. He hadn't a drop of alcoholic liquor. I was called to an old man who had got a serious injury—fracture of the pelvis. He had been attended by one of the “old-stagers,” who used to bleed as freely as the modern men have since given stimulants. After the man's life had been despaired of, I inspected the case. He was a tee-

totaler, and I treated him as a tee-totaler ought to treat a case, and I got him through. He has been able now to get his living for three or four years. Now I will give you three workhouse cases. I meant, when I came upon this platform, to have given the names of all the people I have referred to, in order that any one might have inquired into the truth of the matter; but I will give the names of the workhouse cases, so that any who doubt the results may satisfy themselves. I was called to another case of fracture of the pelvis. I was not at home, and the surgeon went. When I came home they said to me, "You needn't go up; the man will be dead before the morning." I went up and treated that case, as I had other cases, without any stimulants, and that man is now married, and getting his living in the coal mines of Durham—that man was called Perrall. In 1866, a person in the Tavistock Workhouse, named Milman, was taken very ill; she had recently been confined, and was suffering from very extensive hæmorrhage of the bowels. Some of the gentlemen on this platform will understand me when I say that all the urgent symptoms were there, and she was treated with gallic acid; but then there came on sloughing. It was a very critical case, and I knew very well that if it had turned out badly those who would have given her alcoholic drinks were watching me. I called in two surgeons professionally. One said, "You must give this case brandy;" the other one said, "You must give plenty of port wine." I thanked them for their advice, and they left. I treated that woman not with alcoholic drinks, but with medicinal stimuli. A week after I saw one of the medical men, and said, "She's improving." He said, "Ah, it's all very well to say she's improving, but she's got some internal disease, and she'll die." That was four years since, and the woman is now working in Tavistock Workhouse, perfectly well, without any stimulants. Now, don't imagine that I am bringing forward these cases to praise myself; that is not my object. But I

must go further into that case of Milman. If the medical gentlemen will turn to the *Lancet* for June, 1866, they will find two similar cases reported by Mr. Nunn, of the Middlesex Hospital, except that there was not the complication of hæmorrhage, which made my case much worse. They will find that Nunn treated his cases with moselle, with brandy, and with champagne. The result was one death and one recovery. After all, my non-stimulant treatment will beat your London hospital treatment under the same circumstances. I have to treat those who don't drink every day of their lives, only occasionally; but such persons are rare in London hospitals. After all it is the moderate drinkers who give us the work, and not the occasional drunkards. The man who gets drunk occasionally doesn't injure himself nearly so much as those who drink "moderately" continuously. I will give you one more case, and that will be an example of the fact that the most grave surgical injuries can be successfully treated without the use of alcoholic drinks. A waggon-load of culm—a sort of coal—went over a man's leg; there were two tons in the waggon, but this weight was, of course, distributed over the four wheels. The result was that the man received a comminuted compound fracture of the leg. Another district surgeon was called in to advise as to what was to be done, and they both decided that the man's leg must be taken off. He was sent to the Tavistock Workhouse, a distance of ten miles. I said, "I shan't take this man's leg off." I knew he could not have drunk very much, because I knew he could not afford it, for his wages were only £6 a year. He might have "done his beer and 'bacca" now and then, but I knew he could not have been an habitual drinker. I treated him without any alcoholic stimulants. He came in in August, 1867, and instead of having his leg taken off, he walked out himself in March, 1868. This is a case well known to the Poor Law Board, because there was a good deal of correspondence about it. What I mean

to inculcate by these cases is that grave surgical injuries can be successfully treated without alcoholic drinks. I spoke of having a district under the Poor Law. At the very time that I had that very large district with the enormous pay of £43 a year, there was an outbreak of cholera at Beer-laston. The medical man there—a man of more than average ability—required assistance, as the work was too much for him. The guardians sent me down—and what did I find? In the parish there was a great panic in consequence of the enormous number of deaths. The people had got the notion that brandy was the thing—brandy for everything. I induced my partner to withhold the brandy, and from the time that it was withheld the recoveries were much more numerous, and we never lost a case of fever after that. Of course the fever after cholera is a fever of debility.

Dr. HENRY MUNROE, F.L.S., of Hull, said:—My antipathy to teetotalism was once very great, and if anybody had told me fifteen years ago that, on the 30th January, 1872, I should be making a teetotal speech in Exeter Hall, why I should have said at once, "Then I shall be an escaped lunatic!" Or if anybody had asked me about this "Declaration," which has been signed by 250 of our leading physicians in the metropolis and provinces, I should have regarded it as a piece of impertinence, and should not have signed it. Then I should have said some very bitter things about this Declaration, simply because I didn't understand the treatment of disease without alcohol. Since then I have made the action of alcohol a study—and I have come to the conclusion that the Declaration is right. I could give you my reasons, but I should occupy the whole evening, and I dare not do that. All that I can say, if you ask me why I should sign it now, is that once I was blind, but now I see. I will refer to certain fashions in medicine—for there are fashions in medicine just as there are fashions in ladies' bonnets. We had fashions in medicine forty years ago, and we have fashions now. Forty years ago we

used to bleed—or rather, I should say "phlebotomize"—every one. I have sat at the table of a hospital forty years ago, and when I have seen prescribed "blue pill at night, and black draught in the morning," I have known what was going to be the next question. The next question would be, "Have you any pain anywhere?" And woe to the patient if he said he had, or if even he thought he had. The next line would be certain to be *Venesectio ad uncias duodecim* ("bleeding to twelve ounces"). I have seen that repeated a dozen times in one morning when I was a pupil, upon all sorts of persons, of all ages, of all sizes, and of both sexes. A reaction took place in the profession. We gave up the lancet, as we found that people living in cities and towns were not always labouring under inflammatory diseases. What we are labouring under now is debility. Everything is debility now. We went to the other extreme—therefore brandy became the *elixir vitæ*, the sole panacea for all the ills that flesh is heir to. If a man were in collapse, brandy relieved him; if in the agony of colic, why brandy revived him; if life was burning out in fever, brandy cooled him; and if he was starved to death, why brandy warmed him. In fact, brandy was the pet drug of the "pharmacopœia." Everything else dwindled into obscurity. I will give you some of my reasons for discontinuing the treatment of disease with alcohol. I don't like to talk of myself, but I can tell you that I have had twenty attacks of gout during the last twenty years; if that doesn't make a man wiser I don't know what will. During the first ten years of this period I had sixteen attacks lasting from seven days to four weeks; but during the last ten years, since I abandoned the use of alcoholic liquors in any shape whatever, I have only had four attacks, two of them through accidents, and the other two very mild, lasting only a few days. I have tried brandy and water, I have tried beer, and I have tried wine, and the whole category of such things, and I have ascertained how much of each of them it will take to induce an

attack, and I have published these experiments in the *Medical Journal* and need not repeat them to-night. I determined to discontinue the use of such liquors, and have been much more successful in practice ever since. I ceased also to order any more for my patients, and they are better too. In Hull, in the year 1849, we had the cholera very bad indeed. It ravaged amidst us fearfully. Above two thousand persons were buried in our cemetery, victims of this disease. I saw at least one hundred persons a day in that dreadful disease, and most of those who died were from thirty to forty years of age. We tried the brandy and opium treatment, and that was a failure. Altogether we lost somewhere about forty or fifty per cent. of the persons attacked by the stimulant treatment and with opium. One medical man thought that the opium with the brandy was not strong enough, so he ordered that very strong doses of camphine mixture should be administered, and he pledged his reputation that this would cure any case of cholera, but I believe it was a failure. The cholera took off nearly all the drunkards. People whom I have seen intoxicated at my surgery in the morning were dead the same night, and buried the next morning. It was a fearful thing. I remember six cases of persons who were so obstinate as to refuse to take any doctors' stuff or brandy. I wrapped them up in blankets sprinkled with turpentine, and left them. Four out of that six are walking about now. They recovered, but we lost fifty per cent. of the others. Turning to fever—I have tried alcohol in fever, and I have treated fever without alcohol; and my experience is that we lose five per cent. in treating cases of fever without alcohol, and twenty-five per cent. with alcohol. It is the experience of work-houses and hospitals that one patient in ten of those treated with brandy for fever died; but of those treated without brandy only one death in thirty cases occurred. That is my experience, and it is also the experience of the medical gentlemen who spoke from this platform a short time

since. I have treated many cases of delirium tremens, and I have given alcoholic liquors heroically, but had many deaths during that treatment; but when the patients were isolated and cut off from all spirits and liquors, I have never lost a case. It is a rare thing to lose a man under such treatment; and it is singular that we should give a man who has been made sick by the alcohol the same thing as a medicine to cure him. In regard to hæmorrhage and violent floodings, I remember a case of this kind in which I had to sit up the whole night to give brandy, and religiously gave it to the lady, and I have gone home in the morning with the reflection, "What a wise provision it is that we have such an excellent thing as brandy always at hand!" I tried the case next time without brandy, and the lady sooner got better, and there was no secondary fever, and her remark was, "I shall never try brandy again." I could go on multiplying these illustrations, but I must not tire you. With regard to the indiscriminate use of alcohol, this "Declaration" says, it is "believed" it has a tendency to promote the formation of habits of intemperance. The *Lancet* thought we ought to alter that word "believed," and say, "it is asserted." Does ever any man assert that which he does not believe? It seems singular, but I believe it to be true, and it is a great sorrow to me now to think of, that for twenty years I made many families unhappy. I believe I have made many drunkards, not knowingly, not purposely, but I recommended them to drink. It makes my heart ache, even now, to see the mischief that I have made in years gone by, mischief never to be remedied by any act of mine. But in this respect at least I do not sin now, and have not done so for the last ten years. I do not take intoxicating drink myself, and I do not have it in my house, and I do not give it to anybody else. Further than that, I do not like folks to come into my house who have it in them. I do not send to the public-house for my medicine, for I object to the publican coming in for a share of

the honour of curing my patients. I remember some years ago ordering a man in fever some port wine. I said, "You must get a bottle of good port wine, and take a glass three or four times a day." After a day or two I asked him, "Don't you feel better?" He said, "No, my tongue is not so clean, and my digestion not so good. I am rather falling back. I got some good port wine." "Well, you must double the dose." I think he looked like a martyr. "We got the best," he went on, "we paid one-and-nine-pence a bottle." Why, I felt so queer! I would ten times sooner he had bought a bottle of red ink. It would have done him just as much good. If I had only known of Mr. Skey's wine, a guinea a bottle—the price of a doctor's fee—I should have been delighted to have tried it, but I really do not know where the cost is in that guinea bottle. I cannot find it out because there is nobody knows what wine is. We have no standard for wine. I can make you some at ninepence a bottle, as good as ever you tasted. It is now about ten years ago since I determined to treat disease without the exhibition of alcohol in any form; but, more especially, not to prescribe it in the guise of rum, brandy, gin, wine, or beer. Soon after my determination to pursue the non-alcoholic treatment of disease, was my faith in the treatment put to a severe test. Not having the experience of years I now possess, during which period I have attended thousands of cases of almost every disease, you may easily imagine my anxiety as to the result of such treatment. Well do I remember a case, one of pyæmia, occurring in a healthy man, who, for the last sixteen years, had been a strict teetotaler, but prior to his taking the pledge had been a great drunkard. When called upon to see this person, I deemed it my duty to inform him that in this particular disease it was the universal practice of the profession to administer largely a daily supply of wine and malt liquor to nourish and strengthen him; and that, even with these advantages, recovery from a severe

attack was exceedingly rare. I had seldom seen a case recover, save in a young, strong, healthy person. This being the case, and not wishing to lose my patient for the sake of my teetotal hobby, I said to him, "I suppose you wish to get well again; and you are not too scrupulous as to the means used?" In fact, I did not like to come to the point at once, and say, "I want you to take some wine and stout." I felt as if I did not want my patient to believe he was breaking his pledge, but rather that he was taking the very liquors which once had ruined him as medicine, scientifically prescribed, to combat disease. He replied, "Well, doctor, my children know nothing about drink. I don't wish to die if there is anything in the world to save me, for I have a kind wife and nine children dependent upon me. You must do whatever you think proper." I felt now in a worse fix than before. If my patient had said he would not take any intoxicating drink, and died without taking any, the burden would have been off my shoulders. If he had said he would take it to save his life, and recovered, I should have treated him *secundem artem*. But when he said I might do that which I thought proper, and he would leave his case in my hands, I thought if I did not order stimulants in the shape of wine and beer, and the patient died, I should be culpable in the eyes of my professional brethren, and, alas! exposed to the calumnies of friends. Again, I thought if I ordered him intoxicating drink, and he recovered, he might fall again into drunken habits, and, saved from one kind of death, die at last the death of the drunkard. The horrid thought pursued me, "Better he should die in his sober senses than die muddled with drink." I took special interest in the case, as it was to me, then, one more of experiment than practice. Day by day, night by night, week by week, I watched him slowly but surely sinking. When, with quivering lip and feeble voice and anxious countenance, he asked, "Doctor! do you think I shall pull through?" my heart

ached to respond; and, almost against my convictions, I replied, "I had hope he would." His wife broken-hearted, his children crying around his bedside, his friends deemed it now the proper time to interfere, and sent him wine, which he obstinately declined to take without the doctor's order. There on a table near the bed stood the bottle of "old port," and beside it a glass filled with the precious wine, which anxious friends were begging of him to take to save his precious life. "Do take it or you will certainly die," said they, "for the sake of your friends, your dear wife, your children, take it, for why will you die?" Looking at them all earnestly, stretching out his bony arm and pointing his skeleton fingers to the bottle, with a feeble but decisive tone of voice, he replied, "Take that bottle away! If this be dying I am unspeakably happy! When I was dying through drink, I was wretched, and awfully afraid! Take it away! It lost me heaven once!" The crisis came at last. I was obliged to tell him that now he was at the worst, that he was about to die, but he struggled on. Faith in his doctor, hope in his Saviour, buoyed him up. The struggle was great, the battle of life was nearly lost, the lamp was nearly burnt out, but still he did not die! By careful nursing, and by the use of a simple and unstimulating diet, the lamp of life began to burn a little brighter, the pulse to beat a little stronger, the eye to shine a little clearer, and the voice so lately heard but in a whisper to speak a little louder in cheering accents to his nurse. On the very Sunday afternoon on which it was thought his remains would have been borne to the cemetery, his wife and children were silently sitting over the fire in the adjoining room, moaning their hard fate and blighted hopes, when, hark! they heard a tremulous voice trying to sing:—

"Praise God from whom all blessings flow."

That afternoon there was a cry heard in that house again, a cry re-echoed in Heaven, that cry was, "He's saved! 'Tis father's voice! He's saved! He's

saved! The lost is found! He who was dead is alive again!" The patient kept his pledge; and I have now reason to believe that by that means his life was saved. Before his illness he was a consistent teetotaler, and a popular advocate of the total abstinence cause. Since his recovery, he still preaches the doctrine of temperance with greater zeal and earnestness than ever. My words would but feebly convey anything like the impassioned eloquence of my patient, when speaking about the fallacy of strong drink being a curative agent in the treatment of disease.

Mr. HENRY LANKESTER, M.R.C.S., of Leicester, said: Although I feel it an honour to speak on this platform on such an occasion as this, still I must confess that to face such an audience as this for the first time in my life is an ordeal from which I should have recoiled if I had not felt deeply the importance of the temperance movement. Whilst some of those who addressed you on a former occasion have had thirty or forty years' experience of abstinence, I have only been an abstainer some three years. I feel, however, that I am not only growing older in this movement, but also stronger; and, so far from doubting the wisdom of the step I took when I signed the pledge, each year increases my satisfaction in regard to it; each year convinces me of possessing greater powers for usefulness and larger sympathies with my fellow-creatures; and each year makes me wonder more that, for the sake of a little self-indulgence, I should so long as I did hold out against my sense of duty. I had seen amongst my acquaintance, and especially amongst my patients, sad instances resulting from the excessive use of stimulants. Homes which had been peaceful and happy became scenes of discord and wretchedness; health which had been good, recklessly thrown away; and prospects which had been bright, either marred or altogether wrecked; and I was led to ask myself: "Am I doing all that lies in my power to stem this torrent of evil?" and in asking that question

I was led to become a total abstainer, not so much from observation as to the therapeutic effects of alcoholics, though that had some weight with me, but from the conviction forced irresistibly upon my mind, that as a Christian professor I was not quite acting up to the spirit of the New Testament if I in my person sanctioned the use of an agent which was exercising such baneful effects upon the temporal and eternal interests of my fellow-men. And it is under the same conviction that, laying aside any timidity I might feel, I stand here to-night, if I can't do more, at least to hurl a stone against the giant evil of our land. The belief which is prevalent throughout the length and breadth of the land, as to the necessity of alcoholics as articles of diet, and of their value as medicines, has been mainly fostered, and is still being fostered, by members of the medical profession, and it therefore behoves every one belonging to it, who disbelieves in these supposed virtues, to take his stand boldly on the side of the minority, and even though it may be at some cost to himself, to use his utmost endeavours to counteract the mischief which has been done—mischief which is blighting the happiness of innumerable homes, scattering misery and pauperism broadcast over the land, ruining the health of vast numbers of our population, lowering the tone of our morals, and lessening our influence for good throughout the world. The important Declaration which has recently emanated from the medical profession, and which has come forth somewhat opportunely, is an authoritative answer to the speech lately made by Mr. Bass, for it starts with the presumption that the indiscriminate prescription of alcoholic drinks by medical men in many instances gives rise to the formation of intemperate habits. This and other statements, as you know, have been demurred to by some, but I can scarcely conceive it possible that any one looking fairly and impartially at the facts which must come within his own experience can doubt the truth of the allegation. The fre-

quency with which our patients appeal to us for our sanction of the use of intoxicating drinks, or for advice as to the quality of them, or as to which they shall take, is a proof of the power which is placed in our hands for evil if we falsely encourage a popular idea, or for good if we deprecate it, and point out how fallacious is the idea which imparts strengthening qualities to it. The belief which is prevalent throughout the country, that these articles are necessary for the maintenance of health, and that great virtues attach to them as medicines, is a belief which it should be our aim to point out to be erroneous, and which we should endeavour, if it be possible, to remove. Although it has been my practice in all cases to prescribe stimulants with moderation, and although lately I have almost ceased their use, yet I must, in all candour to my medical brethren, say that now and then cases do occur in which I have proved them to be beneficial. These are, however, very greatly the exception to the rule, and whilst saying this I am fully prepared to declare my belief with those who have spoken to-night, that as a whole disease is very much more successfully abated without the use of stimulants than with them. In regard to the treatment of typhus and typhoid fever, my own observation goes most thoroughly to confirm the statement by Dr. Gairdner that these diseases are brought to a more successful termination, and that a more speedy restoration to health is obtained by the entire disuse of alcoholics, and by relying more upon milk and beef-tea. The idea which has been in vogue in regard to delirium tremens, and to which allusion has been made to-night, that the patient should be pulled through by the poison which induced the disease, is as unphilosophical as it is erroneous—and I trust the time is speedily approaching when, if the disease does not disappear from our land, that notion at any rate will be exploded, and when the malady will be treated on the more rational plan of supporting the system by suitable nourishment, so as to eliminate the

noxious element which has been poured into it. Erysipelas and carbuncle, again, are diseases for which I never think of prescribing stimulants, but which we were all taught to believe needed wine *ad libitum*, until it might have been difficult to say whether the patient was suffering most from the disease or from the intended remedy. I can most fully bear out the treatment which Dr. Edmunds has so warmly advocated in regard to nursing mothers. Perhaps there is no case in which a stronger prejudice exists as to the necessity of stimulants than in the case of nursing mothers. I believe that, both for the interest of the mother and offspring, far greater benefit is derived by the entire abstinence from stimulants. Very many cases of derangement of the liver and stomach for which we are consulted, either have arisen from or are aggravated by the use of stimulants; yet how commonly is it the case that in laying down the dietary for such cases alcoholics are included in it, with the result of perpetuating the mischief rather than relieving it! It is indeed difficult to persuade such patients that, however immoderately they have drunk, they may wholly and entirely abstain from the use of drink not only with safety, but with benefit to themselves, and it is difficult indeed to convince such patients against the prejudice which they or their friends may entertain, so as to induce them to make a fair trial. They will not listen to reason or experience in the matter. Or again, in exhaustive diseases, such as chronic abscesses, or the results of serious injuries, it has been usually the case to administer stimulants in large quantities, though I believe these may be most successfully omitted, and nourishment substituted. I have under my care now the case of an engine-driver, who was seriously burnt on the face, and the upper and lower extremities. There has been, of course, most profuse suppurative discharge, and he would ordinarily have been ordered stimulants. He is progressing admirably without, so far as I know, a drop of them. I,

however, content myself by expressing my belief that as stimulating drinks possess no strengthening properties whatever, so in all cases of disease, associated with debility, I should discountenance their use, and rely rather on hygienic arrangements and diet. Ere long I trust we shall cease to see such statistical tables as have lately been published in regard to the consumption of alcoholic drinks in our union workhouses and hospitals—tables which show discrepancies, both as to the amount and as to the quality of those beverages, as used in these different institutions, and which may well excite a doubt as to their utility, and at which the temperance reformer may well be excused if he points the finger of ridicule. Ere long, I trust, we shall see the proposed Temperance Hospital in full working order, and in a position to publish opposing tables, which shall speak with a voice so authoritative that the medical and surgical staffs of our hospitals shall be compelled to lend an ear to it, and with that result we shall see not only an improved line of practice in those institutions, but also find a more rational plan of treatment imparted to our medical students. The town from which I came to-day is a large, prosperous, and rapidly increasing one; yet I am compelled to say with grief that I think the intemperance of the people increases in a greater ratio even than their number; and this is scarcely to be wondered at when I recollect that we have a publichouse for every 180 of the population. The brilliant decorations of our gin-palaces, and the attractive seductions of the music saloons, influence most prejudicially many of our people, and especially the young, in such a way as to lessen the efforts—indeed to counteract the efforts—which are made on all hands to elevate their habits, to purify the masses, and to christianise them. These efforts, I believe, will be comparatively futile through the land until the Christian Church rises to a sense of the obligations which rest upon her, and until the medical profession throws off its bondage of routine and binds itself earnestly to

wage war against this evil. Let these two professions, joined in the noble mission of ministering to the diseases of soul and body, join also in a vigorous uncompromising war against the conventional and social usages of the land, and as the result we shall see such a change as it is simply impossible to estimate, and in the end such a result also as only eternity shall be able to reveal.

Mr. F. L. G. GUNN, M.R.C.S., Surgeon to the 99th Regiment, said: In looking over the list of speakers for to-night in my hut at Aldershot, I saw there was no military man amongst them, and I felt, as a Christian man, I could not resist the temptation of coming up to London and sitting on the platform here, but certainly I had no idea of speaking to an audience like the one before me. I have very much pleasure, however, in being here, and in saying that I can substantiate almost every word that has fallen from the gentlemen who have already addressed you. I have tried the teetotal system in the Arctic regions—as far up as any man has been and returned—81.30 degrees—and I have seen the effects of alcohol there on the men on board the ship in which I was serving. I found that for a few minutes after they had taken stimulants, they were, perhaps, more lively than those who took coffee instead, but the latter were always up to the mark to the end of the watch, which could not be said of the former. With regard to a hot climate, again, I may state that I have been in Central Africa, the hottest and most deadly of climates, and I now stand before you after having thirty or forty times been attacked with African fever; I attribute, under God's hand, my being here to my temperance. I felt very much the remarks of Dr. Munroe with regard to cholera. Two years ago I was placed in a station in Africa, where the cholera swept off over half the population in about twenty days. I found that the pure negro, that is, the race furthest removed from the different grades of the white men, had their physiological resisting power, but those who were nearer the white

grades had a greater power to resist the poison of this disease. Almost all this class recovered, with the exception of two or three, and those two or three were abandoned characters— young men who had taken to drink, and who, as a consequence, fell victims to the disease. I feel every day I live that we in the profession have much to account for, and I make this honest confession to-night that I fear I have prescribed more alcohol than I should have done. I know that disease might be met with less stimulants than the profession have been in the habit of giving. In the army I can truly say that of three-fourths of the crime and disease, intemperance is the proximate cause, and many a bright specimen of British manhood would now have been an honour to the service who has been degraded because of intemperance.

Mr. J. J. RITCHIE, M.R.C.S., of Leek, said: I stand here to-night because I believe the habit of taking intoxicating drinks to be the most prolific cause of misery, disease, and death in our country; because I believe the use has been fostered to a great extent by either the declared opinions of medical men as to its wholesomeness or their silence as to its harmfulness, and because I believe that, as beverages, these drinks are totally and always unnecessary and mischievous, and their medical prescription vague and empirical. The habit of taking these drinks is so interwoven with all the social customs of our country—with births, marriages, and deaths, with buying and selling, with hospitality and friendship—that many people believe that if they were to give up this practice, it would be like the wrenching asunder of many pleasing ties that bind friends together, and would also be casting aside much of the amenities of social existence. Again, the constant imbibition of these liquids produces or exercises so fascinating or so seductive an influence, and produces such an aberration of the mental faculties and moral sense in those who indulge in them, that they can't see cause and effect, and while severely condemning the victims of

intemperance, they cordially and heartily recommend and praise the use of the very article that has occasioned that condition. Here, then, I think, we have the cause, fashion, custom, habit, and afterwards that immoderate craving which is a physical disease in the persons who have taken these drinks for a long time. It seems a fearful thing for any man to say that he can't help it, but I believe solemnly that there are men who cannot help becoming drunk if they take any alcoholic drink. I have had men in my surgery who have come praying for something to stop that craving. They do not want to drink—they wish not to take it; but as they stood there, they declared they must do so, unless they had something that could prevent that craving. I say that when any agent exercises an influence like that, it becomes all good and faithful men to hesitate whether they should use it at all. But men don't always drink because it is the fashion, and having drunk, they have not got to this position. How do they begin to drink at first? I think we can see how that was. They were urged to take it because they were told it was good. There, I think, our profession has been to blame in not declaring the true nature of this article—that it is a poison. Every chemist and every physiologist will tell you this, and why should we be continually taking small doses of poison? You would say a man was a fool if he went on taking small doses of arsenic or strychnine or anything else like it. Yet these good folks take it, and believe it is doing them good. I am happy to say I am not one who has bolstered up this delusion with regard to the taking of intoxicating drinks. For more than twenty years, with one exception, I have never touched it. That one exception was after a very severe attack of diphtheria, caught in the exercise of my profession, and in the recovery from which I was most kindly assisted by several of my medical brethren, who begged that I would take a little quinine and port wine. Against my own will, and really because I was anxious to please those

who had been so kind to me, I took a few glasses, but I firmly believe it did not do me any good, and if I had had as much experience then as I have now, I should not have touched a drop. With the exception of that, I have had extremely good health. I do not know when I had headache. I very seldom have an ache or pain. I do not know what indigestion is, and should not know from feeling that I have a stomach. I live in a very cold region, exposed to very great varieties of temperature; up considerably at night, as well as working all hours of the day, and I attribute my robust health, and energy, and ability, to do work, to the fact that I abstain totally from all intoxicating drinks. I frequently have persons consulting me who take these liquids in what they call a "very moderate" degree, who never take it in such a way that they are abnormally affected by it, who are yet suffering in another way from the very article they have taken believing it was doing them good. I assert that any one who wishes to feel in perfect health, to be free from dyspepsia, to eat good healthful food, and so ensure vigorous life, had better abstain altogether from these artificial things. In my practice I have given no stimulants in fever for years. I have never, so far as I remember, for ten or twelve years lost a single patient from typhoid fever, and never given a single drop of stimulant therein. I have had patients who have been accustomed to take it moderately, and I have said, "I believe firmly that you will do better in this illness if you touch nothing of the kind, and if you will trust yourself to me in this matter, I think I may promise, so far as I can judge from past experience, a pretty quick recovery." They have agreed to that, and I have invariably had the happiness of seeing my patients recover far quicker than used to be the case in former days, when much stimulant was given. In nursing, too, I have invariably asked my patients to abstain from alcoholic drinks, for I verily believe that one of the greatest curses is the drinking of mothers who are suckling. It is perfect nonsense for anybody to say

they cannot suckle without it, because it has been done over and over again in thousands of instances, and if mothers cannot suckle without it, they had better not suckle at all. In the little town in which I live, I think we have been rather beforehand with even you Londoners. You are talking of establishing a hospital where disease shall be treated without alcoholic liquors. A very grand thing this is, and I should amazingly like to see it done, but we have done it at Leek. A relative of my own has erected a beautiful building, called "A Memorial Cottage Hospital." She has managed it herself, and she supports it. It has been open now about thirteen months. We have had about forty cases, for we take in any that the medical men of the town like to recommend. If there is room such cases are admitted, the medical men attending them just as they would if the patients were in their respective dwellings. All the medical men in Leek, remember, are not total abstainers by any means. We have one other abstainer, but on the whole we do not prescribe a very great deal of this article against which we are speaking to-night. In this hospital for the thirteen months there have been about forty cases of accidents, rheumatic fever, bronchitis, diseases of the joints, &c., which in the ordinary course would be considered to require stimulants, and they have every one been treated by all the medical men in the town, according to their cases, without any stimulants, except in one case, which died. Understand me: I do not say it was because he had stimulants administered to him that he died, for his was a most serious case, and he would very probably have died any way. I should, in my case, have let him die sober. That is the only case of death; and the remarkable thing is, that none of the medical men have ever prescribed it, and the patients have got rapidly better—many of them when it was not expected that they would. They have gone out in much better health than they came in—even those who were chronically ill. No doubt this result was owing to the good nursing and

the food they had in the hospital; but they have never touched strong drink, although accustomed to take it in their homes. Some of them have gone out saying that it was their resolve never to take it again. I mention this because it is a practical thing; and if it can be done on a small scale, it can be done on a large one, with greater results, and with the certainty of as great success. In fact, my own conviction is positive about this, that we should have far less disease if every drop of alcoholic drink were done away with to-morrow; and we should be able to treat the disease we have infinitely better without than with it. I am sure I do not envy the feelings of any professional gentleman who goes to a patient and says, "Now, my good friend, if you don't take some of this drink you will die," and subsequently finds out that he has not taken this advice and got better; I say, I do not envy his feelings. I dare say you all know a capital lecturer named Richard Horne, and I wish I could tell the following story in the same racy way in which I heard him tell it. It has reference to an individual somewhere in Somersetshire, who was so ill as to be very near death's door. The medical man attending him called in a brother professional in the neighbourhood, and they thought, when consulting, that the patient was so far gone as to render it impossible for him to hear what they said. The last-called-in gentleman said, "He must have wine; he will die if he does not." The patient overheard him, and said, "I always take the medicine the doctor sends me." "But you must have some wine." "Well, if the doctor sends it, I will. I have always taken the medicine the doctor sends me." The doctor didn't see it in that light; but the patient's employer happening to be present, and not wishing to lose the services of so good a workman as this was, said, "I will be very glad to supply the wine," and the man only consented to have it on condition that it was properly labelled with two or more tablespoonfuls, as the doctor might think fit, to be taken every four hours.

When the medicine arrived in the shape of a bottle of port wine, the patient poured out the proper dose into another bottle, corked it, put it away, and at the end of four hours the same thing was repeated. The doctor calling the next day, found the patient slightly better, and said to him, "How foolish it would have been of you to have refused this prescription of wine, which we knew was for your benefit!" The man kept his counsel, and disposed of the contents of two bottles in this way. He recovered from his illness, and soon after meeting his master, the latter said he was very glad to see him about again, and added, "You see it didn't take much of that wine to do you good: you should not be so foolish and obstinate. I hope you have learned a lesson." "Did they tell you I took it, sir?" asked the man. "Of course. I sent two bottles." "Then they told you wrong, sir; for if you will come home with me I will show you the wine." He took the astonished master home with him, and, of course, produced the wine. For any medical man to say that a patient will die if he doesn't take it is ridiculous and absurd. People are getting a good deal wiser, and a great many won't take it even when it is ordered. The other day, in a place not far from my own town, I know an instance where a medical man prescribed for a child who had got bronchitis, a bottle of stout. The mother stared at him, and said, "This child has never taken a drop in its life." "It must have a bottle of stout at once—a bottle every day." The woman very wisely refused to give it anything of the kind. The same individual, I heard, prescribed four bottles of stout to an individual, who, it was well known, had nearly killed herself by drinking, and as it happened to be a parish case the relieving officer thought that was rather too much, and so he refused to send it. But I am thankful to say that new light is breaking in upon our profession, and time it did! I know this new system is against our interests, so far as profits go. I know I should have been a richer man if I had taken a little, and

advised my patients to do the same, for the fact is they get well too soon—and another very striking thing is this, they are not often bad. The fact is, they get well so soon that we shall have to look out for some other business. But remember this, the highest end of our profession is prevention. I am medical officer of health at Leek. By sanitary and other measures we have raised the average life of each individual within the last ten years—as compared with the previous ten—eight years. Our mortality used to be 29 per thousand; it is now 23. The average age of each individual used to be 24; it is now 32. My sanitary inspector was not a total abstainer, but a very active man, and in looking round and seeing what he did see, that drinking and drunkenness was at the bottom of all the mischief he came across, he was so thoroughly impressed with this, that although he always used to take a little alcoholic drink, for two or three years he has never touched it, and says he never will. When anybody speaks to him about taking some, he says, "Come round with me some night, and let me show you what I can show you, and you will not take any more."

Mr. HENRY DIXON, M.R.C.S., Watlington, Coroner for South Oxfordshire, said: I am proud to belong to a profession that, disdaining all mere selfish considerations, will come forward and boldly protest against strong drink as productive of disease, as the incentive to vices which produce disease, and too often obstructive of the successful treatment of disease, and will do so because they have the mind to disdain all such considerations when they are balanced against the welfare of their country and the good of mankind. It is by conduct such as this that the medical profession will exalt itself in public estimation; for the public expect, and they have a right to require of those who profess to be the conservators of the public health, that they will utter the voice of warning against all sources of danger to that health. I am as much opposed as any man can be to non-professional persons meddling with

professional subjects, and teaching the doctors what they ought to do, but I am extremely desirous that the medical profession should in no way lend its countenance or support to the common use of those beverages; that it should not yield to the tastes and prejudices of those who long to swallow any amount of ineffectual antidotes so long as they can have the sanction of their medical attendant to swallow the all-effectual bane. Such persons are only too glad to have the opportunity of saying, "My medical attendant has permitted it. I take it by medical advice." I hope that will not be the case, and that the medical profession will not degenerate into mere traffickers in drugs and liquors, and so fall from its exalted position, and lose that place in the public estimation which by the nature of its calling, and its godlike character, it is bound to maintain. I feel that we have no reason to be at all alarmed upon this subject, especially when we have before us that grand Declaration which does so much real credit to the 250 odd who signed it, as it does honour to the profession to which they belong. I do not think it necessary to remind this meeting that drunkenness is a great evil; neither do I think it necessary to remind it that a great proportion of the crime, poverty, disease, and premature death over which we have this day to lament are caused by strong drink, and neither is it necessary to bring the weight of professional opinion to bear upon this fact, that if there was no intoxicating drink there would be no intoxication. All this is admitted, and a grand admission it is, for it discovers to us the malady, its cause, its consequences, its cure. Malady—alcohol on the brain; cause—putting alcohol into the stomach; symptoms—various acts of madness too numerous to mention; consequences—poverty, crime, disease, and death; remedy—total abstinence. I venture to say that if this matter were put before a sober body of New Zealanders, whether met in this hall or on London Bridge, they would deal with it in a common-sense way and abolish drink altoget-

ther, but that is more than we can expect from an intelligent people like the English. But, however much this is pressed upon our people, the members of my profession will not be surprised to know that a decision like this has not been arrived at, for they know the wide difference between giving advice and getting it followed—between prescribing physic and getting it swallowed. Our remedy is looked upon as extreme. Well, we freely admit that it is extreme, but it will take a great deal to knock the belief out of us that it is extremely good. Now, as regards my professional experience. I am here to bear my testimony as a member of the medical profession, and to give my adhesion to that which others have said in support of the non-alcoholic treatment of disease. What has my experience taught me? It has taught me the truth of what the poet says:—

"At thirty man suspects himself a fool;  
Knows it at forty, and reforms his plan;  
At fifty chides his infamous delay,  
Pushes his prudent purpose to resolve;  
In all the magnanimity of thought  
Resolves; and re-resolves: then, dies the  
same."

That is precisely my experience in regard to those who get into the habit of drinking. There are hundreds and thousands of men in this country who know they are great fools for taking the drink, and who have resolved and re-resolved never to touch another drop, but who will die drunkards nevertheless. That is an awful thing to say, but there is a class of men who have gone so far, and have so lost restraint over themselves, that they will have the drink. We would earnestly entreat you to get some measure from Parliament that will legally protect and restrain these poor creatures. Some such measure as Dr. Dalrymple's Habitual Drunkards Bill is what we want, and what I am alluding to. I know the objections raised against it. "It is interfering with the liberty of the subject." Interfering with the liberty of the man who has lost all liberty, and become the veriest slave! Interfering with

the liberty of the man who has no other liberty left but that of self-destruction, of degrading, disgracing, and ruining his family! I say that what is wanted for that class is legal restraint, and they will be thankful for it themselves, and thousands would have to bless the day this restraint was put upon them. I know from experience of them that these persons are beyond all moral influence, and if not restrained they must be lost. Whether they would ever return from confinement is another question, but I believe they would, and be entirely cured if an asylum were offered to them. There is another class who have a great liking for the drink, but who have not yet become drunken, incapable, or irresponsible. Though they like the drink, they have control over themselves, and if placed under proper influences—say with abstainers—might live a sober, if not a godly, life; but so soon as they are removed from such influences, the higher the position of those they mix with, and the more respect they call for, the more damaging is the influence they have. “Mr. So-and-so drinks,” says such a person, “and why should not I?” but to one in the condition I have described, this reasoning means downfall. For such, we earnestly beseech all good Christian people to abstain; to be on the side of safety, of right, of purity, of soberness. I have had something like twenty years’ experience in total abstinence, and that twenty years has proved to me its great value, and made me more than ever desirous that others should come and share in its blessings and its benefits. I have for nearly twenty-four years held an appointment under the Poor Law over a very large district, and for the last sixteen years I have not recommended anything like intoxicating drinks as a medicine for the poor. With the poor people we can do as we like, but rich people do as they like; but we do with the former what we believe is for their good, and they know it. Although I have taken away the alcohol that would make them live faster, I have not been unmindful to supply them

with that nourishment which has made them live slower and better. Of course my not recommending anything of this sort and other men in the same union recommending it became a matter of inquiry with the board of guardians. Some said, “Oh! he’s a teetotaler,” but that was not the question. The question was whether the patients suffered in any way; whether they were longer on the books; whether there were more deaths; and whether there was any murmuring amongst them for not having been treated with stimulants. Of course that inquiry was made, and I can tell you with great pleasure that the result was most satisfactory. So satisfactory was it, that one of the guardians imprudently said to me that he should recommend an increase in my salary. I said, “If you do that, I resign office at once,” because it would look like getting an increase of pay at the expense of the poor creatures who didn’t get the drink.

Dr. J. A. BOWEN, of Preston, said: I believe that if the medical aspect of the temperance question has been left the last on the list for public consideration, it is not necessarily the least important. I believe that the work of these great temperance organisations would be incomplete, and their success greatly retarded, without it. I have no striking story to tell you of the manner in which I became a teetotaler. My parents were total abstainers—and I was therefore trained by precept and by example a total abstainer. My temperance education led me early to watch the effects of drink upon those who took it; and that education and continued observation have resulted in my standing before you a life teetotaler. I am one of those who believe that it is very much in the power of the medical profession to uphold or prolong the use of alcoholic liquors as beverages on the one hand, and on the other to suppress them in a great measure and so assist the temperance reformers in their great work. And as I believe that the temperance reform is purely for the moral, social, and physical benefit of mankind, it is my

duty to take my stand upon the temperance platform, and to contribute my influence to it. I have always been accustomed to hard work, for during the greater part of my apprenticeship I had to serve two masters, and have had still heavier duties to perform almost ever since. I have been professionally engaged thirty nights consecutively—the greatest amount of sleep in any twenty-four hours being two. I have been out seven whole nights consecutively, and never laid down to rest, but my strongest liquor has been new milk. I never yet saw during my whole course of life such benefits arising from intoxicating liquors to those who took them as would ever tempt me to use them myself. During my professional education, my teachers tried to make me believe that alcoholic liquors were very strengthening. I watched very carefully for the strengthening effects where they were so freely administered, but I have never yet seen them. I have not seen any recoveries to health and strength where it has been freely given and natural food avoided. I have seen tens of thousands of cases of recovery to health and strength entirely without the drink. I think Dr. Todd was quite right in trying to put a stop to the wholesale bleeding of the people, but in recommending the use of brandy and wine in the place of bleeding, if he meant to try that as a test as to the best mode of treating disease, I maintain that the experiment was incomplete. Side by side with the brandy and wine treatment instead of the bleeding, he should have placed as many cases of the same nature of disease under proper nursing and proper medical treatment without the liquor. This must be done by the profession before they can rightly claim any superiority for the alcoholic treatment. I have tested the matter for myself, for I have now treated 40,000 cases of disease entirely without alcoholic liquors. I never prescribed it to that extent to make men drunkards, and I am thankful to say that for the last three years I have not prescribed a single spoonful

of any intoxicating liquor for any purpose whatever. There are cases you have heard hinted at even to-night, in which medical men consider it absolutely necessary to order some stimulant. The observations made during my professional life teach me that alcohol is a stronger narcotic than a stimulant. I demur entirely to the name of stimulants being given to alcoholic liquors. To test the quality of an article, give a full and free dose, and you will have its principal effect manifested first. Give a man a full and free dose of alcoholic liquor, and what is the result? He is struck down directly, stupefied and laid in the gutter. I maintain that if alcohol was stimulating in small quantities, it would be stimulating in large quantities. Did you ever try to lift up a man out of the gutter? If you have, you know he is not very much stimulated into activity. He is stupefied almost into a profound coma. I have estimated this question very carefully, and my estimate is that the narcotic action is, at the very least, one-third greater than the stimulating action even in small doses, and that the narcotic action is four times more durable than the excitation which it produces. What is the condition of a patient treated with brandy? You will say that you give the patient two ounces of brandy every two hours. What is the effect upon that patient? After the first two hours there is a certain amount of excitation, greater than at the beginning, but gradually wearing off. At the end of two hours that brandy has lost all its excitable powers, and it is stupefying the brain and nervous power of the patient. You repeat the dose, and what have you then? You have one power stupefying and one power exciting the patient. You have a battle going on in the system—not always to the advantage of the patient. At the end of the second two hours you repeat the dose, and you have then one power exciting and two powers stupefying. At the end of the third two hours you repeat the dose again, and what is the condition? You have then (as I estimate that alcohol is at

least one-third greater a narcotic than it is a stimulant) three powers stupefying for the one power exciting; and that is the condition of the patient throughout the whole course of repetition of the brandy, and if a patient has to recover with three powers of narcotism against one of stimulation, don't for anything say that you are giving a stimulant. Alcohol always disturbs the functions of the brain and nervous system. If that clock finger instead of moving steadily round was quivering backwards and forwards, how could you tell the time? and if by large quantities of alcohol you take away the powers of the nervous system, and prevent them from giving you correct indications and symptoms, they will give you nothing of the kind, and the doctor visiting a patient in this state may come and say, "He is going on very well," but for all that he may be dead in an hour. The indications have been taken away by the narcotic influence of the alcoholic liquor, just as if you removed that finger from the clock you would be unable to tell the time. In like manner I maintain that it is impossible for a medical man to read the state or condition of his patient correctly so long as that patient is under the influence of alcoholic liquors. The result of my own experience confirms this view. I have nothing like the number of deaths in my practice now that I had when I used to prescribe alcoholic liquors, and I maintain that every medical man who wishes to read correctly the state and condition of his patients must read it through the indications given by that system planted in man by his Maker, and that if he has destroyed the sensibility of the nerve, it is impossible for it to give those in-

dications as intended by nature. I believe that the use of alcoholic drinks in disease creates a morbid craving for the same. This morbid craving leads to the excessive use. It is simply a satisfying of that morbid craving. The small use leads to the large use, and the greater use to the excessive use, and so on. The common use of alcoholic liquors by the people in the present day is so free a use, that I wonder, if this condition of things is to go on, what is to be the medical dose or the medical use! It puzzles me to know how large the dose will be in a few years to come. The people are already using such large doses themselves, that by and by it will be something like taking a bottle of physic at once. A large alcoholic treatment is the medicine of the age, and my profession cannot deny that its vast power is owing to empiricism rather than to the scientific treatment of disease. If they do not see that to-day, they will see it ere long. But the system, I am glad to say, is being weighed in the balance. You are putting a weight in the scale to-night. It is being weighed in the balance, and I have no hesitation in saying that it will be found wanting.

The CHAIRMAN: I rise to express our deep obligations to those medical gentlemen who have been with us this evening. We know what their profession requires of them, and how difficult it is for them to leave home, and therefore we feel the more indebted to them for having made the effort to come here to-night. Such a motion needs no seconder, but I shall ask you to express your approval of it in the ordinary way.—The motion was carried by acclamation.



SELECT COMMITTEE ON THE TREATMENT OF HABITUAL DRUNKARDS.—In the House of Commons, on Feb. 22, Mr. D. Dalrymple nominated the

select committee on habitual drunkards. The Committee began to take evidence on Friday, 8th March.

## ALCOHOLIC PARAPLEGIA.

By SAMUEL WILKS, M.D., *Physician to Guy's Hospital.*

THE above name is one I have long used in reference to a class of cases which are not at all uncommon, but have been hitherto left undescribed, in a manner worthy of their importance, in systematic works on medicine. In my published lectures on Diseases of the Nervous System I briefly referred to the affection as one requiring our earnest recognition, and gave some particulars of the cases which I had then seen. Since that time several others have come under my notice, and during the last year no less than four more. These facts had led me to commence a paper for the consideration of one of the medical societies, when I met with an essay by Dr. Handfield Jones, contained in the *Practitioner* of December, on "Epilepsy and other Nervous Affections resulting from the excessive use of Alcohol." A perusal of this essay shows me that my object is now unnecessary, and that I need do little more than recommend its attentive perusal to the readers of the *Lancet*, and say for my own part that I can endorse nearly all the statements therein contained. I have seen epilepsy and many other nervous diseases result from alcohol, although my attention has been more especially drawn to the spinal affection. In order, however, to strengthen Dr. H. Jones's statements, I will quote from a lecture given by me in October, 1867, as it contains an epitome of what I had then observed:—

"*Drunkards' or Alcoholic Paraplegia.*—I do not know that this is deserving of a distinct name from its possessing any pathological peculiarities; but as arising in connection with a very well marked exciting cause, it may deserve your special attention, and I refer to it the more especially because I believe authors have generally overlooked it. I have already told you how long-continued habits of intemperance in alcoholic

drinks tend to the production of a fibrous or fatty degeneration of the various tissues of the body, and that, as a consequence, the membranes of the brain and spinal cord become thickened, and the organs within wasted. This, of course, would give rise to what might be called a general paralysis of body and mind. But besides these general results, we often meet with more direct effects on the spinal cord, and to these I particularly refer. I have now seen so many persons, especially ladies, who have entirely given themselves up to the pleasures of brandy-drinking, and been rendered paraplegic, that I have become pretty familiar with the symptoms. From what we hear of our continental neighbours, it would seem that the diabolical compound styled 'absinthe' is productive of exhaustion of nervous power in even a much more marked degree; it would appear that the volatile oils dissolved in the alcohol give additional force to its poisonous effects. Of course, drunkards of all descriptions suffer from nervous and muscular weakness; but, as I before said, it is more especially in the legs that the effect is most striking. A loss of power is first observed, accompanied by pains in the limbs, which might indicate a chronic meningitis of the spinal cord, and in some cases there is anæsthesia. There is, at the same time, some amount of feebleness of other parts of the body as well as the mind, and thus an approach to general paralysis is produced; but sometimes the symptoms are almost confined to the legs, and resemble in character those of locomotor ataxy."

Since this was written I have seen several cases of a similar kind; and it is worthy of remark that they occurred mostly in women. I would repeat that something more definite is intended by the term "alcoholic paralysis" than that general

muscular and nervous debility which is as well known to the public as the profession; for no character is more easily recognised on the stage of the theatre than the victim of chronic drunkenness. That which I wish more particularly to draw attention to, is the case where alcohol is seen exerting its influence more directly on the spinal cord, making paralysis the leading symptom. Although there is a tendency to a particular form of degeneration in alcoholism, it is not very evident why one person should be affected in one way and another in another; or why one person should have cirrhosis of the liver, another Bright's disease, and a third atrophic meningo-cerebro-myelitis. I use this term since the changes which the brain and spinal marrow undergo are probably identical with those which are found in the two other affections just mentioned. As regards the brain, the tissue degenerates and the membranes become thickened, and thus the mental condition of the "brainless sot" is familiar to all. It very often closely resembles that observed in the general paralysis of the insane; which is not remarkable, seeing that the two affections may have in some cases a similar pathology. Now, in alcoholic paraplegia there is every reason to believe that the spinal cord is affected in the same way as these other organs, and the following is the usual condition of the patient:—She lies in bed or on a couch, complaining of severe pains in all the limbs, more especially in the lower ones, which are much wasted, or of a sensation like electric shocks running through them, together with numbness and considerable anæsthesia, and at the same time only slight power of movement, or total inability to stand. With the addition of the akinesia, the symptoms are not unlike those of ataxia, which in its ordinary form appears to be comparatively rare in women. In one case there was hyperæsthesia. In nearly all the cases the liver has been enlarged; there has been sickness, and all the other usual signs of chronic alcoholism. I alluded in my lecture to the existence

of pains in the limbs from which drunkards often suffer before any marked signs of paralysis have shown themselves.

As regards treatment, this is hopeful, and should always be attempted; for I think it must be confessed that it is impossible to tell what kind and amount of change has occurred in the centres to produce paralytic symptoms. If the patient be young and the tissues not much degenerated, I should recommend the ordinary treatment, and especially such medicines as the iodide or bromide of potassium, before commencing galvanism and a tonic course. What, however, I would especially insist upon is the removal of the primary cause of the complaint. This seems a common-sense recommendation; but, I am sorry to say, is one not always enforced. Sometimes the reason is that the doctor fears for his position as health-proprietor of the family should his hints be offensive, or he has not moral courage to unfold an unpleasant truth. Sometimes, however, he will most conscientiously refrain from recommending a discontinuance of the alcohol for fear of the results, such as the sudden dissolution of the patient, or an attack of delirium tremens. He need not have the slightest fear on these grounds, for no harm, but only good, will ensue from its withdrawal. I am aware that opinions are at variance in this matter, but nevertheless I enforce my own views strongly, with a large amount of experience to support me. I have never yet seen a person die or suffer from delirium tremens, or any other disorder in consequence of the complete withdrawal of alcohol when the system was being poisoned by it. On the other hand, I have seen such remarkable recoveries after its total discontinuance as would certainly surprise those who had never ventured upon the plan. I have seen persons, more especially ladies, lying on their beds surrounded by friends waiting for their last moments, where scarcely a mouthful of food had been taken for months, where the prostration, increased by

urgent sickness, was extreme, and where they were constantly plied with brandy to keep them alive a little longer, and yet in such cases, where the diagnosis was clear, from the blood of the patient being overcharged with poisonous elements, and the room stinking with the fetid vapours of the body, I have recommended a withdrawal of every drop of the so-called "stimulus," and with effects more marvellous than any one who has not adopted the plan can conceive. Unfortunately these cases of alcoholism are so bound up with moral considerations, and in women so often associated with bodily or mental suffering, that it is most difficult to publish them in all their details. Three cases which I have witnessed during the last year have made a great impression upon me. A lady not far from my residence, the unfortunate subject of alcoholism, and having considerable weakness of the legs, was reduced at length to the utmost stage of prostration by want of food and constant retching. A little brandy was put from time to time between her lips, in order, as was hoped, to eke out her existence a little longer. The end apparently approaching, straw was laid down in front of the house, and her children were sent for in order to take a final farewell, when, after repeated urging on my part, all stimulus was suspended. The sickness soon ceased; the blood became gradually depurated; after a few hours a little food was taken; and in a fortnight's time this lady was sitting at the dinner-table with her family. I can say nothing, of course, about the likelihood of relapse, as this opens up another subject. But lately, also, I have been seeing a tradesman and his wife, with Mr. Joyce, of Notting Hill, both of whom were addicted to intemperate habits, and both, most remarkably, had almost complete paraplegia. We prevailed on the husband to relinquish his drink, and he began at once to improve; but we had no influence on the female, who was approaching the state of delirium tremens. In another case, that of a medical man, who,

after drinking hard, became so ill that he took to his bed, had epileptiform attacks, ate nothing, and was constantly retching, his wife standing over him administering brandy and champagne from time to time to keep him alive a little longer, I succeeded, after several attempts, in inducing his wife and two medical attendants to stop every drop of alcohol. When this was done the patient soon cried out for drink; but, after imploring in vain for some time, he was violently sick, and then sank into a sound sleep. Upon waking he took a little beef-tea, in a few hours ate some solid food, and within a week was back again in his practice.

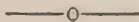
I do not wish to discuss in this place the merits of alcohol as a remedy, as it is one I constantly use with the utmost advantage; but simply to state my experience that I have never seen the slightest harm accrue from the sudden deprivation of the accustomed stimulus, but, on the other hand, have had the satisfaction of knowing that I have saved fellow-creatures' lives as certainly as if I had plucked them drowning out of the water. I cannot conceive what the objection is to the withdrawal of the alcohol under the circumstances I mention, any more than I can conceive why, when the system is saturated with poison, and the patient dying from the effects of it, such a gross burlesque on the homœopathic doctrine should be practised as to continue administering it.

The purport of this paper is more especially to draw attention to the fact of paralysis, and more particularly spinal paralysis, occurring as a result of alcoholism; and therefore that when a medical man is called in to see a case of this kind, he should remember intemperance in drinking as a possible cause, just as he would if he found an enlarged liver.

If the affection should turn out to be in any way peculiar in its pathology it will certainly deserve a distinct appellation; but even should the morbid changes in the cord, together with the resulting symptoms, resemble what is seen in other forms of paralysis, I would

still recommend the adoption of such a term as alcoholic paralysis as significant of its cause, for we are warranted in so doing by the use of the expression puerperal, syphilitic, or uræmic

epilepsy (eclampsia) in reference to the origin of the fits when arising under special circumstances.—*Lancet*, March 9.



## ELIMINATION OF ALCOHOL.

DR. A. DUPRE, of Westminster Hospital, has recently presented an important paper to the Royal Society "On the Elimination of Alcohol." The following summary of the paper appeared in *Nature*, of February 1, 1872:—

Obviously three results may follow the ingestion of alcohol. All the alcohol may be oxidised and none be eliminated, or a portion only may be oxidised and the rest be eliminated unaltered; or, lastly, all may be eliminated again unaltered. Assuming the last to be the case, it would follow that, if a certain quantity of alcohol be taken daily, the amount eliminated would increase from day to day until, at last, the amount eliminated daily would equal the daily consumption, be this time five, ten, or more days. If, on the other hand, all the alcohol consumed is either oxidised or eliminated within twenty-four hours, no increase in the daily elimination will take place in consequence of the continuance of the alcohol diet. Guided by these considerations the author undertook two series of experiments, in which the amount of alcohol eliminated by both kidneys and lungs was carefully estimated. The analytical processes employed are described in detail. First series:—After a total abstinence from alcohol for eleven days, the urine and breath were examined, after which, from the 12th to the 24th day, both inclusive, the author took 112 cub. centims. of brandy daily (equal to 48·68 grms. absolute alcohol). The urine and breath were examined on the 12th, the 18th, and the 24th day. The urine was also examined during the five days following the cessation of the alcohol diet. The analytical

results obtained are given in a table. Second series:—After having again abstained from the use of alcohol in any shape during ten days, the author took 56 cub. centims. of brandy (same as above) at 10 a.m. on March the 29th. The urine was collected from two to three hours up to the 12th, from the 12th to the 24th, and during the next succeeding two days. The alcohol eliminated in the breath was also estimated during the same intervals. The analytical results are also arranged in a tabular form. The results of both series may be summed up as follows:—The amount of alcohol eliminated per day does not increase with the continuance of the alcohol diet; therefore all the alcohol consumed daily must, of necessity, be disposed of daily; and as it certainly is not eliminated within that time, it must be destroyed in the system. The elimination of alcohol following the ingestion of a dose or doses of alcohol ceases in from nine to twenty-four hours after the last dose has been taken. The amount of alcohol eliminated, in both breath and urine, is a minute fraction only of the amount of alcohol taken. In the course of these experiments, the author found that, after six weeks of total abstinence, and even in the case of a teetotaler, a substance is eliminated in the urine, and perhaps also in the breath, which, though apparently not alcohol, gives all the reactions ordinarily used for the detection of traces of alcohol, viz. it passes over with the first portions of the distillate, it yields acetic acid on oxidation, gives the emerald-green reaction with bichromate of potassium and strong sulphuric acid, yields iodoform, and its aqueous solution has a lower specific gravity and

a higher vapour tension than pure water. The presence of a substance in human urine and the urine of various animals, which yields iodoform, but is not alcohol, had already been discovered by M. Lieben. The quantity present in urine is, however, so small that the precise nature of this substance has not as yet been determined. Finally, the author points out an apparent connection between this sub-

stance and alcohol. It was found that, after the elimination due to the ingestion of alcohol had ceased, the amount of this substance eliminated in a given time at first remained below the quantity normally excreted, and only gradually rose again to the normal standard. A careful study of this connection may perhaps serve to throw some light upon the physiological action of alcohol.

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## Notes and Extracts.

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**STIMULANTS AND BLOODLETTING.**—It was highly probable that the plan of universal bloodletting pursued by our forefathers was, on the whole, productive of less evil than the modern plan of universal stimulation.—*Lancet*, Jan. 20.

**TREATMENT OF HEPATIC DROPSY.**—Dr. Basham, physician to Westminster Hospital, contributes a valuable paper on this subject to the *Practitioner*. He says that in 99 cases out of 100 the remedy all but universally selected by the patient or his friends—rum and milk, gin and milk, gin and bitters—while it momentarily relieves the irritable stomach, perpetuates the original mischief; and he says that in treating such cases “the use of all stimulants must at once be discontinued.”

**ALCOHOLIC STIMULANTS IN WORKHOUSES.**—Many facts have been published during the last few months which tend to show that the general mode of prescribing alcoholic liquors for inmates of workhouses is exciting increased attention in all parts of the country, not only amongst medical officers and boards of guardians, but amongst the public at large; and we are glad to learn that a return has been moved for in the House of Commons, which will shortly put the public in possession of important facts relating to this subject from every workhouse in England and Wales.

**DR. BEALE ON THE ACTION OF ALCOHOL.**—The *Medical Times and Gazette* of March 2 contained a report of part of a lecture by Dr. Lionel S. Beale, on the treatment of fever, in which he advocates the use of stimulants. The use of the words “probably” and “perhaps” in the following sentence shows that Dr. Beale has not arrived at any very definite conclusions respecting the action of alcohol in the human body:—“Though probably not applied to the nutrition of tissues, its elements may perhaps assist to form some of the constituents of bile, sugar, fatty, and amyloid matter.”

**DR. MURCHISON ON INFLAMMATION.**—In a lecture on inflammation, published in the *British Medical Journal* (March 16), Dr. Charles Murchison, when describing the treatment that should be adopted, says—“1. Remove, if possible, the cause of the inflammation. This is the first object always to be aimed at. If it can be effected, it will do more good than all other remedies put together. When inflammation of the stomach is excited by chemical or other irritants, the first thing to be done is to pump out or neutralise the poison. When inflammation of the same organ is due to the practice of frequent sipping of alcohol, a removal of the cause suffices to effect a cure; and all attempts at cure, while the cause remains, are useless.”

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MEDICAL TEMPERANCE JOURNAL.

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Original Contributions.

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ALCOHOLICS IN WORKHOUSES AND HOSPITALS.

POINTED attention is being turned—and not a moment too soon—to the extent and mode of prescribing alcoholic fluids to the inmates of Workhouses. This is a question that may pertain more immediately to the medical officers and guardians of those humane institutions; but strictly and properly, it is a question that belongs to the nation. To the hapless inmates who, by reason of age, penury, or decrepitude, have fallen, it may be, into the infirmity, certainly into the dependence, of a second childhood, the nation stands in *loco parentis*. A network of these public homes covers the land, and under any point of view the nation, through its representatives, are their true and ultimate guardians. By all the rights of control that accrue to them from being charged with their support, and by all the considerations of humanity that press on them as protectors of the helpless, the public are bound to see that no injurious, ensnaring, or even extravagant element is allowed needlessly to enter into the sumptuary arrangements of these institutions.

Facts have from time to time transpired, of very grave significance, relating to the administration of intoxicants in Workhouses, and also in Hospitals. Some of these impress, and even appal us by their manifest prodigality; others cheer us by their valuable testimony to the marked benefit to health that results from the adoption of the abstinent method. One thing never fails to strike us, namely, the immense disparity that reveals itself in their several alcoholic bills, with nothing to show—unless it be something that is a great deal worse than nothing—of tangible good to warrant the more lavish in their wasteful expenditure. All this makes us anticipate with interest the forthcoming

return that has been moved for in the House of Commons, and may soon be expected, and which will supply us with an authentic account of the practice that obtains in all the Workhouses of England and Wales.

One of these Boards might have done well to wait for these returns before taking what is both a very needless and a very retrograde step. The *Lancet* says: "The Leeds Board of Guardians have resolved to allow their aged inmates (over fifty years of age) half a pint of beer on four days of the week. Last year the Board refused the allowance on the ground that drunkenness was thought to be one of the main causes of pauperism. Inquiry has shown that not more than one-tenth of the pauperism in the workhouse is due to excessive drinking. This alteration of the dietary will require the sanction of the Local Government Board, and we hope that Mr. Stansfeld will not find it necessary to refuse his sanction." We, for our part, hope that Mr. Stansfeld will withhold his sanction till he discover some more logical *nexus* between premises and conclusion than the Leeds Board, according to the *Lancet*, have been able to present.\* What although inquiry has shown that only one-tenth of the pauperism that has found its way to the Leeds Workhouse is due to excessive drinking? The further question remains, what good ends will be served by this return to beer? Did the inmates take any harm from the want of it during the past year? If their antecedents had been so temperate in the main, could they not have done without that half-pint? And would it not have been better for the intemperate tenth that it had been kept entirely out of their way? But it was only (it may be rejoined) for those who were on the shady side of fifty, to cheer their dull hearts and cherish their thin blood. To this the answer is, it will do neither. It will make their shady years shadier, and their dull hearts duller. "The assertions," say six hundred Dutch physicians, "that intoxicating drinks used moderately are naturally innocent means of cheering up" (and others they name of the like purport) "are without any foundation, and contradictory to experience and to human reason." The same physicians truly declare that "the moderate use of strong drinks is *always unhealthy*, even when the body is in healthy condition." Of 164 answers by medical men to queries sent them by the Massachusetts Board of Health, only one ventured to affirm that the alcoholic "mock" is a benefactor "in the decline of life;" a foolish exception, which only the more emphatically proves the rule. The late Professor Miller, of Edinburgh, aptly illustrates the futility of this notion, by supposing an old man to

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\* In a letter dated June 14, 1872, which we publish among our "Notes and Extracts," the Local Government Board has refused its sanction to the proposal of the Guardians.

electrify his leg into the mimicry of youthful elasticity—at what cost or risk no sensible man needs to be told. Thousands of abstainers, now veterans in the practice, are living and vigorous arguments for Total Abstinence, as the ministering angel of advancing age. Every pound spent for that pauper beer, whatever the bill may be, will be spent to make those Leeds quinquagenarians less healthy and hearty than they would otherwise be; and the systematic character of the indulgence will only make this the more certain. Worse than all, it countenances the mischievous delusion that the habitual use of intoxicants, the worst use of any, is a ministrant to health.

How far that delusion extends, we only too well know. Dr. Basham's experience in the Westminster Hospital, as stated a few months ago in the *Practitioner*, that in ninety-nine cases out of a hundred the remedy all but universally selected by the patient or his friends was sure to be some alcoholic one of a fallacious or temporarily relieving kind, and therefore always mischievous, is by no means rare; and the sooner that delusion is knocked on the head the better.

Pending the forthcoming returns, some useful facts have been published by the committee appointed by the West Derby Guardians to inquire into the use of stimulants in the workhouses of the Union. In their very interesting report, which appeared in our January number, they thus state their aim:—"In the outset of our labours we felt the necessity of ascertaining how we stood on a comparison with other unions in reference to the quantity of stimulants used. To this we felt must be added the knowledge of the comparative effects of a greater or less consumption, as far as these also could be ascertained. The effect upon the death-rate was, of course, the main question. In pursuance of this object, we directed that returns should be gathered from about twenty of the largest parishes and unions in the kingdom. These returns we have carefully tabulated and carried out, and now respectfully present them for your consideration. That our own union should occupy so unfavourable a position must be matter of regret to all concerned." This, they hope may be "a dark background to a bright future." The committee declare that "nothing can be clearer, from the evidence now presented, than that the path of retrenchment is the path of safety and wisdom;" in illustration of which they say: "We lay before you a return of the entries from the medical relief-book at Walton for the last three months. From it we gather that to the male side of the hospital, under one medical officer, with an average of 118 patients, there were issued 3,037 pints of ale and porter, 2,893 glasses of wine, and 6,524 glasses of ardent spirits, during the quarter ending September, 1871, which gives half a pint of ale or porter to every other patient,

and three-quarters of a glass of wine or spirits to every patient every day. The deaths on this side of the house were twenty-five. To the female side of the hospital, under another medical officer, averaging 154 patients, there were issued 1,960 pints of ale and porter, 1,014 glasses of wine, and 1,633 glasses of ardent spirits, giving about half a pint of ale or porter to every fourth patient, and a glass of wine or spirits to every sixth patient each day. The deaths on this side of the house were sixteen—less than one-half of the male side, in proportion to the population.”

The insane wards have been no less insanely treated with drink; the committee protesting, as well they may, against giving intoxicants of any kind to idiots and imbeciles. In the matter of outdoor relief the same anomalies appear—one medical officer dispensing alcoholics to the amount of £56, while another, with a district as large, if not larger, made out to do with £9. Another and glaring abuse is the ale and porter bill, amounting last year to close on a thousand pounds, and of which a small part only goes into the sick wards. This goes to ablebodied paupers and nurses, a practice which the committee condemn, recommending instead, a money equivalent to nurses, and to ablebodied paupers, who have too often “been impoverished and ruined” by drink, “a full and proper supply of good nourishing food.” The committee justly urge: “The fearful epidemic we passed through might well account for a considerable increase in the death-rate, while it lasted; but we do not see that it should have caused an addition to the rates of £1,130 for mere stimulants, still less that it should saddle us with a permanent additional cost. With these facts before us, and with the returns so decidedly testifying in favour of a non-alcoholic treatment whenever it can be reached, we feel we should be utterly wanting in our duty if we failed to point to the great desirability in all future appointments of choosing the medical officers of the union from the ranks of those who would undertake to administer alcoholic liquors with the same care that they do all other medicines of a poisonous nature.”

The need for this remonstrance amply appears from a return which the committee obtained from twenty-two unions and parishes, of the consumption of stimulants in their respective workhouses, showing the death-rate on an average of two years. Where the consumption of alcohol is least, the death-rate is lowest; where 11s. 3d. per head has been spent on drink, the death-rate is no less than one in nine; whereas in other cases, where only 11d. per head has been spent on drink, the death-rate is not more than one in thirty-eight. It needs no Œdipus to divine what corroboration these stray statistics are destined to receive from the Parliamentary returns which may shortly be expected.

Individual testimonies ever and anon crop out to the same effect, but with details of official experience that make them especially valuable and instructive. Whether from workhouses or hospitals, these voices blend in an emphatic unison condemnatory of the free use in these establishments of alcoholic liquors, even as medicine, not to speak of them as a beverage. Dr. Gairdner's statistics of typhus fever cases in the Glasgow Hospital, showing the great reduction of the death-rate under the milk or mild modes of treatment, as compared with the alcoholic, have for years been before the public, and have often been cited. At the last Medical demonstration in favour of temperance in Exeter Hall, Mr. Sleman, of Tavistock, expressed the doubts he entertained more than forty years ago of the alcoholic method, from what he then saw in the borough hospitals. He has been a poor-law surgeon for thirty years, and contrived to do all that time with a strong drink bill of—half a crown! He has been a workhouse surgeon for nineteen years, during sixteen of which his charge for alcoholics on the ratepayers was—"not one farthing!" Other stimulants were used when needed, and now and then a little brandy in amputations, but always given by himself. As compared with other unions, they were then saving £100 a year—the drink bill of a smaller workhouse in the same county amounted to £77 per annum. And yet, thanks to the combined and blind force of prejudice and custom, the Guardians of his workhouse insisted on the introduction of alcohol—a necessity which he accepted, but on the condition, which he battled out, of having the matter under his own control. Dr. Edmunds, on the same occasion, declared it to be "the experience of workhouses and hospitals," and his own personal experience, "that one patient in ten of those treated with brandy for fever died; but of those treated without brandy, only one death in thirty cases occurred." In a paper which appeared in the *Medical Press and Circular*, of February 14, Dr. Edmunds quotes Mr. Skey, as having, in a series of lectures he delivered five years ago to the students of St. Bartholomew's Hospital, brought out his views with no bated breath. "Mr. Skey," says Dr. Edmunds, "introduces these lectures by laying down in sweeping terms the doctrine that all diseases are caused by debility, and that wine is indispensable in the diet scale of the invalid, and for the tonic treatment of disease." He says: "You cannot cure disease with a feeble pulse. Mend the pulse, and nature will do the rest of the work," and he concludes his introductory lecture by telling the students that, in 1848, the quantity of wine he ordered for his patients at St. Bartholomew's Hospital having been commented on by the treasurer, he replied that he would do his best to raise the consumption of wine from three pipes in the year to thirteen,

and that in 1860 the quantity consumed reached that precise amount. Mr. Skey adds, "And the same change of treatment prevails, more or less, in every hospital in London."

Very probably; for there are high tides in medical fashions as well as in other fashions; but in due time they subside. Already they have greatly lowered their crest; and in the light of fuller statistical disclosures they must utterly succumb.

It is all the more requisite to press this question to a solution, that the position of medical officers who have come to see the evils of those alcoholic methods, and have the courage of their opinions, are often placed in circumstances of extreme delicacy and difficulty. "The very gods," says the ancient maxim, "are helpless against stupidity." Under guardians, too often of the comfortable bucolic sort, who live and move in a sphere of prejudice as determinate as the solar system, it is not always easy for an honest and progressive medical man to hold his own, and translate his conscientious convictions into consistent and persistent practice. Of this we have already had illustration in some of the foregoing testimonies. To one more we shall briefly allude. At that Exeter Hall Meeting to which we have had repeated occasion to refer, Mr. Dixon, M.R.C.S., Watlington, Coroner for South Oxfordshire, said: "I have for nearly twenty-four years held an appointment under the Poor-law over a very large district, and for the last sixteen years I have not recommended anything like intoxicating drinks as a medicine for the poor." After remarking that he had in this matter more in his power with the poor than with the rich, he goes on to say: "Although I have taken away the alcohol that would make them live faster, I have not been unmindful to supply them with that nourishment which has made them live slower and better." But so great an innovation was not allowed to pass unnoticed. It became matter of inquiry with the Board of Guardians. Some said, "Oh, he's a teetotaler." Had he indulged freely himself, and doubled or trebled the drink bill for the patients, it would probably have escaped remark. But even prejudice, the most Bæotian, must bend before the majesty of facts. Happily, in this case, the facts were admitted into court. "The question," says Mr. Dixon, "was, whether the patients suffered in any way; whether they were longer on the books; whether there were more deaths; and whether there was any murmuring among them for not having been treated with stimulants. Of course that inquiry was made, and I can tell you with great pleasure that the result was most satisfactory." Let young practitioners take encouragement from cases like this to stand true to their better judgment, and the truth, and themselves along with it, will in due time prevail.

## THE SELECT COMMITTEE ON HABITUAL DRUNKARDS.

THE Select Committee appointed by the House of Commons "to inquire into the best plan for the control and management of habitual drunkards," have examined a number of important witnesses, some of whom came from America to give their experience of the results of the plans adopted in that country. A great amount of interesting evidence was given, but we have not been able to obtain a copy in time for notice in our present issue. The Committee have agreed upon a report based upon the evidence, and have added several recommendations. It appears that all the witnesses concurred in the absolute inadequacy of existing laws to check drunkenness, and that it is desirable that fresh legislation should take place, and that the laws should be made more simple, uniform, and stringent. There can be no doubt that the witnesses were right as to the uselessness of our present laws as preventives of drunkenness. The report states that drunkenness is on the increase in large towns, and this is attributed to the prosperous condition of the working classes, unaccompanied by educational or moral improvement. Higher wages with too many would lead to an increased consumption of drink, and of course to more drunkenness. How is this deplorable state of things to be remedied? Can we deter men from the use of the drink which steals away their brains by fear of fines and imprisonment? The report states that small fines and short imprisonments are proved to be useless, as well by the testimony of competent witnesses as by the fact that the same individual is convicted, over and over again, to even more than a hundred times. We think that the dread of punishment will seldom, if ever, keep men from the drink; we have known men repeatedly punished, and yet never reformed. In fact, no man can be a drunkard and escape suffering. In the case of drunkenness, sin and punishment go together, for the laws of health cannot be violated with impunity. Some important evidence was given before the Committee as to the evil results of drunkenness. It was shown that 79 per cent. of the criminals passing through our gaols attributed their fall to drink; 20 per cent. of the insanity recorded in Great Britain, and about 14 per cent. in America, are attributed to the same cause, and nearly one-half of the idiots are stated to be the offspring of intemperate parents. After describing the terrible effects of drink upon the will and moral powers, and the overwhelming craving for the drink, the report states the awful fact—that this condition is confined to no class, condition,

or sex, and hardly to any age. This is a fact too often disregarded—drunkenness is supposed to be confined to the poor and illiterate, but poisons are not respecters of persons. Whenever alcoholic liquors are used alcoholic effects will be produced.

There is one statement in the report which we think will not bear examination. It states that the moderate use of alcoholic liquors is unattended by any bad effects. Now, if this is true, we should like to know how the transformation of moderate drinkers into drunkards is to be explained. We have seen persons, distinguished by birth, education, and position, slowly and gradually become the slaves of intemperance. How was this change effected? Our idea is, that this declension was brought about by the action of alcohol upon the nervous centres, and that it began with the moderate use of alcoholic liquors, which the Committee say is unattended by any bad effects. We may not be able at the post mortem examination of a moderate drinker to point out the bad effects of his moderate doses, and show the structural changes effected by very small quantities of alcohol. The effects of the moderate use of alcoholic liquors are too subtle for this coarse mode of investigation; they are psychological, they affect the mind and create a belief in the virtues of intoxicating drinks, and an appetite for them which leads to excess. It is common to speak of the evil consequences of excess, of taking too much, and so on, but there is at the same time a disposition to ascribe the excessive use of alcoholic liquors to anything rather than to the cumulative brain-poisoning action of alcohol. And while the fallacy is put forth in a Report of a Select Committee of the House of Commons that the moderate use of alcoholic liquors is unattended by any bad effects, there seems little prospect of any legislation likely to prevent drunkenness, although something may be done to punish or cure the drunkards. Of course the Committee was not appointed to devise plans to prevent drunkenness, but to consider the best way of dealing with habitual drunkards, who are fearfully numerous, and indeed the full extent of the evil is not known.

The report states that there is a very large amount of drunkenness, among all classes and both sexes, which never becomes public, and that this probably produces more misery, poverty, and degradation, than that vulgar drunkenness which comes before our police courts, and there is no law to deal with this. All the witnesses advocated legislation in reference to this source of domestic misery. The absence of all power to check the downward course of a drunkard, and the necessity of providing it, was dwelt upon by nearly every witness, and the legal control of an habitual inebriate, either in a reformatory or private dwelling, is recommended. There are thousands of persons

who are so completely the victims of alcohol as to be unable to guide themselves, and it would be a work of mercy and justice to save them from ruining themselves and their families. According to the evidence of the witnesses from America, this may be done at a small cost, and free from danger of abuse and infringement of personal liberty. If the work can be accomplished so cheaply and safely, the sooner we follow the example of America the better for the bodies and souls of the poor inebriates. We regard drunkenness and the craving for alcoholic drink as a form of disease, and we believe this disease may be cured. Some inebriates have sufficient mental power to enable them to take and keep the pledge of total abstinence from all alcoholic liquors; these persons may be cured by voluntary abstinence. There are others, however, whose wills seem to be paralysed. They have no self-control; they are the slaves of alcohol; and the law ought to do for them what they cannot do for themselves—place them where they may be restored to temperance and health. At present there is no law to effect this, although there are laws to protect other lunatics—but the inebriate is not recognised as a lunatic. If he were to represent himself as Emperor of China, or the Pope of Rome, we should regard him as a monomaniac and place him in an asylum; but, while he is free from what are called insane delusions, he may waste his money, beggar his family, blight his prospects, injure his health, and destroy his life by drinking, and we have no legal power to stop him on his way to destruction. There seems a clear case for a law to protect the property, the families, and the persons of habitual inebriates.

The report suggests more stringent laws for punishing the crime of drunkenness, and, as small fines and short imprisonments have failed, it is proposed to increase the amount of the fines and lengthen the term of punishment, and after three convictions to require the drunkard to find sureties for his sobriety and good conduct for a fixed period, and in default, or a fresh offence, that the drunkard should be detained for a considerable period in an industrial reformatory for inebriates. A Drunkard's Calendar is to be kept, and, after a certain number of offences, the offender is to be registered as an "habitual drunkard," and be liable to be sent to an industrial inebriate asylum by a magistrate for not less than three months nor more than twelve months. If these suggestions are embodied in law, the experiment of trying to prevent drunkenness by punishment will be fairly tested, and we fear will prove a complete failure. In the case of many habitual drunkards the desire for the drink is ungovernable, and they will drink regardless of consequences, and drunkenness will follow. With casual or occasional drunkards the case is different.

These persons are not so perfectly enslaved by alcohol as their more unfortunate brethren, the "habitual drunkards." But these occasional drunkards like the pleasant effects of the drink, and are fond of the excitement of drinking company, and, like the Select Committee, they believe that the moderate use of alcoholic liquors is unattended by any bad effects. They drink and drink, and, without any idea of danger or any desire to become inebriated, the alcohol in their wine or beer poisons their brains and makes them drunk. Now, unless the dread of punishment can eradicate the love of the drink and the belief that no bad effects result from its moderate use, the proposed coercive legislation will not prevent either occasional or habitual drunkenness. We believe, however, in the cure of drunkenness, not by punishment, but by proper medical and moral treatment, and the first and most important step is ceasing to take any liquor containing alcohol. Of course, in the great majority of cases, the treatment of drunkenness may be carried on in the homes of the patients under the direction of their own medical advisers; and, where there is sufficient firmness on the part of the physician in enjoining entire abstinence from alcohol in every form, and sufficient sense and strength of will on the part of the patient to follow the doctor's advice, a perfect cure may be effected. But there are numerous cases where from various causes the domestic treatment of drunkenness cannot be effectively carried out, and which can only be properly managed in a public or private asylum. This has been clearly shown in the evidence of those who have conducted inebriate asylums in America, as well as by those in this country. It appears that the average number of permanent cures is from 33 to 40 per cent. The time in effecting these cures has been from twelve to sixteen weeks. In the institutions in this country the time has been longer. The reason that the percentage of cures is not larger arises from want of power to compel the patients to submit to treatment for a longer period. Where persons have been for years introducing alcohol into their blood, and sending this alcoholised blood to the brain and all other parts of their bodies, until by its action it has made them inebriated, time is required to effect the restoration of body and mind to a healthy condition. But we are fully convinced that, by total abstinence from alcohol and judicious medical aid, the most confirmed inebriates may be perfectly cured.

We have occupied so much space in noticing the matter contained in the report, that we can only briefly advert to some of the "Recommendations" of the Committee. They are, that sanatoria or reformatories, for those who, "notwithstanding the plainest considerations of health, interest, and duty, are given over to habits of intemperance so as to render them unable to

control themselves and incapable of managing their own affairs, or such as to render them in any way dangerous to themselves or others," should be provided. The Committee recommend that there should be two classes of these sanatoria—one for those able to pay for themselves, and the other for those unable to pay or only partially. The admission to be either voluntary or by commitment, and that they should not leave except under certain conditions. That a court of inquiry shall determine whether a man is a dangerous inebriate—and if a majority of that court decide that the party is unable to control himself, and that this arises from the abuse of alcoholic drinks, the magistrate presiding may appoint a trustee for the person's property, and commit him to an inebriate asylum. There are several other measures suggested which appear desirable, such as making habitual drunkards labour for the maintenance of the reformatory, and for the support of their wives and families. In fact the suggestions appear reasonable enough as far as dealing with habitual drunkards is concerned, but we do not see anything in the report or recommendations likely to prevent drunkenness—even if all the necessary legislation were effected, asylums established, and all our present drunkards placed under control. If the belief that the moderate use of alcoholic liquors is unattended by any bad effects continues, and the general use of these liquors by all classes of society is kept up, there will always be an ample supply of inmates for inebriate asylums.



## THE ELIMINATION OF ALCOHOL.

THE question of the elimination of alcohol is not yet finally settled, but is still open for investigation and controversy. The points which seem beyond dispute are, that, when alcohol is introduced into the stomach, it is absorbed into the blood and is carried to all parts of the system, and that some of it passes out in all the excretions. We can remember the time when we were satisfied with Liebeg's theory that no alcohol left the body in an unchanged condition, but that it furnished heat, and, combined with oxygen, passed out as carbonic acid and water. As there was nothing in this theory which showed that alcohol was a necessary of life, or that any special advantages resulted from its use, we saw nothing in it opposed to the practice of abstinence. In fact, according to Liebeg, alcohol was of less value as a heat giver than fat, and dearer than other heat formers; for he says that "Alcohol and alcoholic drinks are, from their price, most

costly materials of respiration. The same effect could be produced in the body by means of saccharine and farinaceous articles of food at one-fourth to one-fifth the cost." (Liebeg's "Letters on Chemistry," page 470, 4th edition.) Of course Liebeg is only referring to the production of heat; but the most important property of alcohol is its power to affect the nervous centres, not its action as fuel in the body. If it only acted like other hydrocarbons, and, by combining with oxygen, furnished heat, there would be little of it consumed, and no evils of any consequence would result from its use. It is its power over the nervous centres which leads to its use by so large a portion of the people, and it is the enormous physical and social evils flowing from this use which induce so many to give it up and advocate abstinence. Still the question as to what becomes of alcohol when taken into the body is one of interest to physiologists. And when Lallemand, Perrin, and Duroy published an account of their researches, similar experiments were tried in this country, and the same conclusions were arrived at. It appeared plain enough that alcohol travelled through the body as a foreign substance, neither repairing tissue nor supplying force, and that it then made its exit at all the outlets of the body. But the correctness of this theory was soon called in question. The experiments had only shown that some alcohol left the body without decomposition, and it was said that we had no right to assume because we had detected a small portion of alcohol that all the alcohol followed the same course. Drs. Anstie, Thudicum, and Dupré tried a variety of *quantitative* experiments, and they only succeeded in obtaining a very small part of the alcohol which had been ingested, and thus great doubt was thrown upon the theory of total elimination. But the experiments of Drs. Anstie, Thudicum, and Dupré were not sufficient to settle the question. There are indeed great difficulties in performing all the necessary experiments. It is not enough to collect the alcohol passing out at one or two of the outlets of the body, for it passes out at all of them. Neither is it sufficient to collect the alcohol for a short period of time and to infer that it always passes out at the same rate. There is also the greatest difference in the eliminating power of different persons. For a perfectly satisfactory determination of the total amount of alcohol which leaves the body in an unchanged condition all the excretions ought to be analysed, and this examination ought to extend over two or three days. The question, however, is not of sufficient importance to induce investigators to incur all the expense and trouble necessary for a perfect solution of the problem. All we can do under present circumstances is, by carefully conducted experiments, to collect as much as possible

of the alcohol leaving the body and try to guess at the total amount eliminated. Dr. Dupré, to whom we are under obligation for the labour he has bestowed upon the question, recently presented a paper to the Royal Society "On the Elimination of Alcohol," in which he endeavours to prove that only a fractional part of the alcohol taken into the body is eliminated, and that therefore the remainder must be decomposed. His experiments were ingeniously contrived and carefully executed, but they did not include *all the excretions*. The results of his investigation are, that the amount of alcohol eliminated per day does not increase with the continued use of alcohol, therefore all the alcohol consumed daily must of necessity be disposed of daily; and as it certainly is not eliminated within that time it must be destroyed in the system. The elimination of alcohol following the ingestion of a dose or doses of alcohol ceases in from nine to twenty-four hours after the last dose has been taken, and, according to his experiments, the amount of alcohol eliminated in both breath and urine is a minute fraction only of the amount taken. It is to be regretted that the whole of the excretions were not included in the experiments, for there is reason to believe that in some persons the skin is very active in eliminating alcohol. But have the elaborate experiments of Dr. Dupré brought the matter to a final termination? We apprehend that there is still much to be learned. Another investigator has arrived at some conclusions differing greatly from those of Drs. Dupré, Anstie, and Thudicum. An account is given in the *Lancet* of the 8th of June of a series of researches by Dr. Subbotin, who has performed a number of experiments on rabbits. The results at which he arrived were: That during the first five hours after the introduction of alcohol into the stomach, a considerable amount escapes by the skin, lungs, and kidneys; that at least twice as much escapes by the lungs and skin as by the kidneys; that the amounts he obtained, showing that from 6.79 to 7.4 per cent. were thus eliminated, were, from various considerations, certainly below the quantities really discharged from the system. These conclusions were arrived at in 1870. The amount of alcohol detected passing out in these experiments is far greater than any found in the researches of Dr. Dupré, who could only find fractional parts escaping from the body. Dr. Subbotin has recently tried some other experiments, and in one of these he found that 12.6 per cent. of the alcohol was eliminated in eleven hours and a half. And in another case, as much as 16 per cent. was eliminated in twenty-four hours. As these results were so widely different from any obtained in this country, we were anxious to learn what Dr. Anstie would have to say to them, and on looking into the *Practitioner* for June, we find a short

note by the Editor, stating that pressure on time and space prevents an analysis of Dr. Subbotin's researches in this number, but Dr. Anstie does not consider the paper of much scientific value. Dr. Anstie says: "In the first place the animals in the research were rabbits—about the most unsuitable that could be found; and, secondly, the doses were invariably strongly narcotic doses. These mistakes alone would be fatal to the value of the paper; but in truth, as we shall show in our next number, the facts and conclusions are put together in a manner which indicates that the author has not understood the real elements of the question at issue." After all, then, what are we to conclude? Is the evidence for or against the total elimination of all the alcohol sufficiently strong to enable us to give a positive answer to the question? Is the whole of the alcohol taken into the body cast out unaltered, or is only a small part cast out and the remainder retained? We must own we are still in doubt, and think that there is ample room for further investigation. But is the question really so important as has been supposed? Will it lead to a better knowledge of the way in which the moderate use of alcohol causes so many persons to take it to excess? Will a more clear idea of the amount of alcohol passing out of the body give us clearer views of what it does in the body? We already know that it is absorbed into the blood, that it is carried to all parts of the system, that it continues to pass out of the body for several hours, that it can interfere with the action of the heart, and, by its action on the brain, derange the operations of the mind; we know, that it can cause disease and death, and we know by experience, as well as by extensive observation, that it is possible to maintain the most perfect health and strength without its aid. This knowledge, we contend, is of far more consequence than a knowledge of the final destination of alcohol. We have heard some persons speak as though the all-important point in reference to alcohol was its oxidation. They seemed to think that if it was oxidised it must be of great value, and that the teetotalers laboured under serious error in discountenancing its moderate use. This is altogether a mistake. The question as to whether alcohol is oxidised in the body as other hydro-carbons are, or whether it passes out unoxidised, is a curious and interesting question, but it is not one of great practical importance. It does not solve the great questions relating to the effects of the general use of alcoholic liquors upon the physical and moral health of the people. Whether alcohol be oxidised or unoxidised, whether the whole or only a part of it passes out of the body, it is certain that its use as an article of diet is altogether unnecessary, and that its use leads to its abuse and all the other evils of intemperance.

## TOTAL ABSTINENCE ESSENTIALLY A QUESTION FOR THE MEDICAL PROFESSION.

THE question of total abstinence, we contend, is primarily and essentially one which concerns medical men, involving, as it does, one of the most important questions of physiology—the natural, proper, and best drink of man. And when we consider the matter as involving the health, the happiness, and the welfare of some twelve hundred millions of living human beings who now inhabit our globe, all of whom must daily drink some kind of fluid in order to live, and the great majority of whom are under popular delusions as to the kind of fluid which should be drunk, we cannot but regard this question as one which has an intimate connection with the medical profession. Nay, we are dismayed at the discrepancy between its magnitude and the small amount of attention paid to it. To enjoy health, and to live out all his days, man must live according to the dictates of nature, and especially must he find out and use those drinks and foods in all their simplicity and purity which nature has designed for him. It is the bounden duty of medical men to become the *pioneers* of the public in these matters, whether they appertain to intricate questions of physiology or not, and to openly and boldly declare the *truth*, irrespective of trade interests, party feelings, or the corrupt and vitiated tastes of an over-luxurious age. If, as we maintain, the daily imbibition of alcohol, in whatever form, or in whatever strength, as the daily drink of man is not only a popular delusion, but is positively injurious, unnatural, productive of disease, and inimical to long life, then we can have no difficulty in estimating the magnitude of the moral responsibility which rests upon those who, by their education, special training, and profession, are peculiarly fitted to deal with such subjects, and whose knowledge and position should enable them to lead the popular taste aright, rather than follow a vitiated, corrupt, and mistaken one, even though it may be universal and of overwhelming strength.

To physicians and physiologists, then, we instinctively and naturally refer the problem—What is the natural, healthy, normal drink of man? At first sight the question may seem a difficult one; not so if we study the book of nature, and bring to bear upon our inquiry the light of modern science, experience, and knowledge. After an unbiassed study and inquiry, extending over many years, we can come to no other conclusion or answer to this matter than that water is the natural and proper drink of man, as, indeed, it is of all other animals. Thousands of hard

workers, in every conceivable work and calling in life, practically endorse our views, and show, by their ruddy cheeks, muscular strength, good health, prolonged lives, and happy homes, that this is *the secret* of their happiness and prosperity. Modern science endorses the same views, and is daily adding evidence in our favour, whilst the Todd-stimulating or fire-water system is every day becoming weaker. The most enlightened physiologist of the age, Dr. Carpenter, says: "Water, in addition to properly selected articles of solid food, would constitute all that the wants of the system can ordinarily require, and there is abundant evidence that the most vigorous health may be maintained, even under very trying circumstances, without any other beverage."

But the wealth and many of the miscalled refinements of this corrupt age have created abnormal and dangerous tastes, and one of the most strong and deeply-rooted of these abnormal tastes is the general and universal craving for alcoholic drinks which have pervaded all nations in all ages of the world's history. Stronger the more they are used, appeasing neither natural appetite nor thirst, these drinks supply no legitimate want in the system, and answer no purpose in the economy of the drinker save the production of disease and the induction of premature death. The results of this sad state of society are painful enough and apparent enough in the world around us to all who have eyes to see and ears to hear. The magnitude of the evil is appalling, and demands the immediate application of the only remedy which can cope with the disease. We affirm that nothing short of total abstinence will effectually restore society to its normal condition. As long as ever individuals use alcoholic drinks upon the false pretences that they have hitherto done, so long will society have to suffer the evils which are inseparable from their use, and evils, too, which are in the very exact ratio to the amount of alcohol consumed. Medical men are becoming every year more and more attentive to the sciences whose especial objects are the preservation of the health of the people, and the *prevention* of disease. In this alcoholised state of society we have one of the most fruitful hotbeds of disease, and we call upon the profession generally, in the name of humanity, to arise and oppose with their utmost power this wicked and inhuman waste of human health and life. We call upon them to declare, even in a more emphatic and detailed manner than the recent "Declaration," the true character of alcohol—to say whether it has not been employed under false pretences of utility; whether it might not be entirely, or almost entirely, discontinued, or, at least, whether the general public, having not the least scientific knowledge either of alcohol or of the beautifully-constructed bodies which imbibe it, have any more moral right to injure themselves with this poison than they have with the other poisons which are

sold with such restrictions at our pharmacies ; and, lastly, whether total abstinence is not the true physiological secret of health, of happiness, of prolonged life, and of public morality ? These are questions concerning the public weal which demand a decided, a bold, and authoritative reply, and they are questions, too, which strictly belong to the science of medicine, and which, whilst we write in the interest of the people, we have every moral and presumptive right to seek to solve at the hands of the medical profession, who should be not only the pioneers of such important inquiries, but the bold and fearless expounders of the truth in such matters. Founded upon scientific truth, total abstinence has nothing to fear from such an inquiry, but everything to gain.

That the drinking habits of the people constitute the *pons et origo* of the greater part of that misery, disease, poverty, degradation, and premature death, which disgrace our country, and, indeed, almost every country of Christendom, is as absolutely certain as that the pretences upon which these poisons are swallowed are delusive. The one axiom is as true as the other. We need not waste the time of our readers about the disease. The diagnosis is easy enough ; nay, there is no dispute about the moral state of society, rotten to its very core—the cause, alcoholic drink. The disease is apparent to all. We seek, rather, to concentrate our energies upon the prescriptions which we have given, after consultation with moral physicians of all nations. It has never been fairly or generally tried, or practically put to the test. We have that confidence in it that we guarantee to stake our reputation upon it, standing or falling by the result. If it fail, after fair and extended trial, let the odium revert to us, and we will for ever hold our peace. If it succeed, let it be generally and universally adopted. Total abstinence has been before the public a great many years, indeed sufficiently long to have crushed it had it not been founded upon a great moral and physiological truth, and considering the determined and dogged opposition with which it has been met by every section and grade of society, the marvel seems to be that it has made the headway it has. Its determined opposition, both to trade interests and the morbid and carnal appetites of an over-luxurious age, have been the great hindrances to its advancement, and, like most other moral reforms, it has had to cut its way inch by inch through a path, as it were, of impermeable granite. Yet total abstinence advances, and comes out of each encounter stronger and stronger, and will yet fight its way to the place that it should occupy as one of the most valuable and most certain remedial adjuncts of modern psychological and material medicine. No remedy in the whole range of therapeutics can equal its curative power, and upon its merits alone it seeks recognition at the hands of the medical profession. Let it

have fair play, and its power will revolutionise society; it would produce a new era in the world's history, and bring about a social millennium of which we might indeed be proud. We are no visionaries; all the benefits that we have promised, and more too, might be proved and realised in a week. Questions of a fractional part of the importance of total abstinence are receiving tenfold the amount of attention by the best scientific authorities of our day, and engaging the interest of Governments and of the nation. When is our measure to receive its fair share of attention? Unfortunately it is unfashionable, but it will be fashionable when men have discovered its intrinsic worth.



## ATHLETIC TRAINING AND HEALTH.

ONE of the causes of the general use of alcoholic liquors is the belief that they are essential to the maintenance of health and strength, and this belief arises from ignorance of the composition and properties of the liquors and of the structure and requirements of the human body. Anything which in any way tends to remove this ignorance so far tends to diminish the use of these liquors, and the evils which flow from their use; and we are convinced that if a knowledge of elementary chemistry and physiology, and of the laws of health, were generally diffused through all classes of society, the consumption of strong drink would be greatly reduced, and the health, the intelligence, and the morality of the people would be greatly increased. We hold therefore that *physical education* is quite as important as classical or mathematical attainments, and that every one ought to strive to maintain a sound mind in a sound body. A small work on "Athletic Training and Health," by John Harrison, M.R.C.S., has just come under our notice, which contains some useful hints on this branch of self-improvement. He says:—

"The conditions essential to the maintenance of health, and therefore to successful physical education, are—1. Sufficient and appropriate food. 2. A due amount of exercise. 3. Pure fresh air. 4. Sufficient rest. 5. A free use of cold water. 6. The avoidance of things which are injurious. We must have some acquaintance with the subjects comprised under the foregoing heads before we can form a reliable system in developing our physical powers; and as none of these are more essential to health and strength than the first enumerated, this essay would be very incomplete if the subject of diet had been altogether neglected, especially as the most rudimentary knowledge of the chemistry of food is a very rare possession."—p. 55.

Mr. Harrison then gives a good epitome of the present state

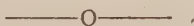
of knowledge respecting the chemistry of food, comparative value of various aliments, and the relation of food to muscular work, but he does not give the chemical composition of any intoxicating drinks. We suppose he does not recognise them as food, for at page 77 he says he "lived for four months on a diet of meat, bread, tea, and water, with the addition of an orange daily; during this period he continued in vigorous health and lost no weight, though undergoing considerable mental and physical labour." And at page 93, in giving instructions as to training for athletic exercise, in speaking of dinner, he says:—

"Either milk or water is the best drink for this meal. Abstain from sweets, pastry, all condiments (except salt), and fermented liquors of every kind. It would be impossible, within the limits of this essay, to prove that alcoholic drinks are not admissible into a training dietary, and to show that they should be considered to belong exclusively to the *materia medica*; this is, however, a conviction which has been forced upon the writer by much observation and reflection."

No one who has had extensive opportunities of studying the effects of the use and disuse of alcoholic drinks, can doubt the correctness of Mr. Harrison's view of the matter. Whatever virtues may be ascribed to alcoholic liquors, they certainly are not necessary for the development of physical, intellectual, or moral excellence. But though these liquors are not required for physical or mental health, we must not expect these blessings to flow simply from ceasing to take them. Abstinence is a step in the right direction, but it is only a step. We must not rest satisfied with ceasing to do evil, we must also learn to do well. Some teetotalers have failed in the practice of abstinence through neglecting important laws of health.



## Miscellaneous Communications.



### THE PHYSIOLOGICAL POSITION OF ALCOHOL.

By Dr. B. W. RICHARDSON, F.R.S.

At the present moment, the "Alcohol Question," as it is called, is, in various ways, one of the most anxious subjects of outdoor controversy. The leaders of the temperance movement, seeing the tide that was once against

them hesitating, if not turning in their favour, are redoubling their efforts with a certain improvement of method which bodes better for them and their works: the politicians are beginning to consider the solution of the problem

of the successful management, by Act of Parliament, of the "habitual drunkard": the statist is re-collecting and revising his tables on the influence of alcohol upon the health, the wealth, and the vitality of communities: the actuary is learning that, with an advance of temperance, his calculations may require amendment: the people resident in quiet and respectable villages, or in sections of great cities and towns, are silently but surely conspiring against that old institution, the public hostel, and that older of institutions still, "mine host" of the hostel: the chemists are busy with their analyses of wines, beers, and spirits, and are charged with subtle arguments on the question whether the animal body, by its living force, can turn alcohol into new and different products of the organic series: and lastly, but by no means leastly, the doctors are making clean breasts on the subject of their dealings with alcohol in the sick room, in a strain which partakes rather of sentiment than of reality, or of that serene judgment and reflection so becoming to the professional mind. In the midst of this singular revolution of thought and of revelation of fact against the use of alcohol, it is, I had almost said, appalling to observe how its use extends. What is protest in theory is met by counter-protest in practice. Is theory or practice false? That is the question.

The answer I shall try herewith to give to that question shall consist of fact and suggestion. I have no part in mere controversy. I have tried by experiment and experience to read the physiological action of alcohol, and the reading thus obtained I propose to put forward in this brief chronicle. Let the reader, if he choose, take up the controversy from the narrative.

I would deal now with one part of the science side of the alcohol question, and which, put in very simple language, would stand as follows: Is alcohol good for the health of man and the lower animals? Does it give them strength, readiness for work, endurance for work, length of days,

happiness? To answer the question relating to the lower animals first, we may, I think, come to the safe conclusion that alcohol is not good for animals under the rank of man. Calves fed on gin-balls—barley-meal and gin—are very soon prepared for the *abattoir*, but are not exalted into anything very sprightly and lovely in the bovine line. On the contrary, they are rendered dull, slothful, sleepy calves, on whose bodies the advice, "Rest and be thankful," is morally branded. Cats and kittens are equally deteriorated by alcohol. I knew some young people who gradually taught a favourite kitten to walk round the dinner-table during dessert and taste wine. It was not long before the taste became a luxurious habit with the animal, but she soon began to fail under it. She slept half her life, lost all desire for play, and in the course of a month or two was dropsical and beyond cure. She contracted the liver disease called cirrhosis, and a very perfect specimen of the disorder she presented after her untimely death. I have observed that birds can be made to acquire a taste for alcohol. Pigeons and fowls, after a little training, will pick up peas saturated with spirit, and subsist on such diet. The animals fatten and sleep, but they lose their vivacity, and certainly lose their muscular power. The same rule holds good with fish. These animals, under the feeble but steady influence of alcohol, become indolent and sleepy and soon die.

On the whole, then, we may conclude safely that God Bacchus meant wine and all its allies specially for man. Perhaps he foresaw that it would be too expensive an article for beasts generally, and so wisely limited its adaptation; or perhaps he did not adapt it wisely for the good of man, since, according to the best accounts of him from those of his votaries who believe in him, he was not a personage who went deeply into any other subject than wine. Was he wise, and is alcohol, bad for beasts, good for man? We will turn to this question.

It is right, before entering on this question, to say that under the word

alcohol I mean specifically the alcohol which ordinarily enters into wines, beer, spirits, and upon which their action as stimulants depends. There are many other substances included now, by chemists, under the term alcohols, such as methylic, butylic, and amylic alcohols; and there is another singular alcohol called mercaptan, or sulphur alcohol, in which the element sulphur replaces the element oxygen of common alcohol. Certain of these other alcohols—those above named particularly—I have made, also, subject of physiological study; and the report of their action would afford scope for an article that could not, I think, fail to be of interest to scientific readers whose tastes lean towards physiological research. But, as it will be simplest to begin with the alcohol that is best known, and for good or for evil is most potent in the world in our time, I confine, on this occasion, myself to it—*ethylic or common alcohol*.

Ethylic alcohol will enter the animal body by any channel through which it can be administered. It may be introduced by the stomach, by the connective tissue beneath the skin, into which it can be readily injected, and by the inhalation of its vapour by the lungs. This last method of administration is, however, the most difficult, the quantity required for the production of an effect being considerable, and the time required very long. The animals most susceptible to the action of alcohol-vapour are pigeons; but even they resist the influence of the vapour so determinately, that the same quantity which would produce a profound effect in half an hour, were it injected subcutaneously, exerts no marked influence if administered through the air.

But in whatever mode alcohol may be passed into the living body to produce modification of physiological action, the changes it excites are remarkably uniform, and *cæteris paribus* the amount required to induce the change is also uniform. Thus I have found, by many researches, that the proportion of sixty grains of alcohol to the pound weight of the animal

body is the quantity capable of producing an extreme effect.

The order of the changes induced is, in like manner, singularly uniform, and extends in a methodical way through all classes of animals that may be subjected to the influence; and as the details of this part of my subject are the facts that concern us most, I shall expend some time in their narration.

The first symptom of moment that attracts attention, after alcohol has commenced to take effect on the animal body, is what may be called vascular excitement; in other words, over-action of the arterial vessels of the heart, or, speaking still more correctly, over-action of the heart and arterial vessels. The heart beats more quickly, and thereupon the pulse rises. There may be some other symptoms of a subjective kind—symptoms felt by the person or animal under the alcohol—but this one symptom of vascular excitement is the first objective symptom, or that which is presented to the observer. I endeavoured in one research to determine from observations on inferior animals what was the actual degree of vascular excitement induced by alcohol, and my results were full of interest. They have, however, been entirely superseded by the observations made on the human subject by Dr. Parkes and Count Wollowicz.

These observers conducted their inquiries on the young and healthy adult man. They counted the beats of the heart, first at regular intervals, during what were called water periods, that is to say, during periods when the subject under observation drank nothing but water; and next, taking still the same subject, they counted the beats of the heart during successive periods in which alcohol was taken in increasing quantities. Thus step by step they measured the precise action of alcohol on the heart, and thereby the precise primary influence induced by alcohol. Their results were as follows:—

The average number of beats of the heart in 24 hours (as calculated from eight observations made in 14 hours)

during the first or water period, was 106,000; in the alcohol period it was 127,000, or about 21,000 more; and in the brandy period it was 131,000, or 25,000 more.

The highest of the daily means of the pulse observed during the first or water period was 77·5; but on this day two observations are deficient. The next highest daily mean was 77 beats.

If, instead of the mean of the eight days, or 73·57, we compare the mean of this one day, viz. 77 beats per minute with the alcoholic days, so as to be sure not to over-estimate the action of the alcohol, we find—

On the 9th day, with one fluid ounce of alcohol, the heart beat 430 times more.

On the 10th day, with two fluid ounces, 1,872 times more.

On the 11th day, with four fluid ounces, 12,960 times more.

On the 12th day, with six fluid ounces, 30,672 times more.

On the 13th day, with eight fluid ounces, 23,904 times more.

On the 14th day, with eight fluid ounces, 25,488 times more.

But as there was ephemeral fever on the 12th day, it is right to make a reduction, and to estimate the number of beats in that day as midway between 11th and 13th days, or 18,432. Adopting this, the mean daily excess of beats during the alcoholic days was 14,492, or an increase of rather more 13 per cent.

The first day of alcohol gave an excess of 4 per cent., and the last of 23 per cent.; and the mean of these two gives almost the same percentage of excess as the mean of the six days.

Admitting that each beat of the heart was as strong during the alcoholic period as in the water period (and it was really more powerful), the heart on the last two days of alcohol was doing one-fifth more work.

Adopting the lowest estimate which has been given of the daily work done by the heart, viz. as equal to 122 tons lifted one foot, the heart, during the alcoholic period, did daily work in excess equal to lifting 158 tons one foot, and in the last two days did extra

work to the amount of 24 tons lifted as far.

The period of rest for the heart was shortened, though, perhaps, not to such an extent as would be inferred from the number of beats; for each contraction was sooner over. The heart, on the fifth and sixth days after alcohol was left off, and apparently at the time when the last traces of alcohol were eliminated, showed in the sphygmographic tracings signs of unusual feebleness; and, perhaps, in consequence of this, when the brandy quickened the heart again, the tracings showed a more rapid contraction of the ventricles, but less power, than in the alcoholic period. The brandy acted, in fact, on a heart whose nutrition had not been perfectly restored.

It is difficult, at first glance, to realise the excessive amount of work performed by the heart under this extreme excitement. Little wonder is it that, after the labour imposed upon it by six ounces of alcohol, the heart should flag; still less wonder that the brain and muscles which depend upon the heart for their blood supply should be languid for many hours, and should require the rest of long sleep for renovation. It is hard physical work, in short, to fight against alcohol; harder than rowing, walking, wrestling, carrying heavy weights, coal-heaving, or the treadwheel itself.

While the heart is thus labouring under the action of alcoholic stimulation, a change is observable in the extreme circulation—that circulation of blood which by varying shades of colour in exposed parts of the body, such as the cheek, is visible to the eye. The peripheral circulation is quickened, the vessels distended. We see this usually in persons under the influence of wine in the early stage, and we speak of it as the flush produced by wine. The authors I have already quoted report upon it in definite terms. “The peripheral circulation (during alcoholic excitement) was accelerated, and the vessels were enlarged, and the effect was so marked as to show that this is an important influence for good or for evil when alcohol is used.”

By common observation the flush seen on the cheek during the first stage of alcoholic excitation is supposed to extend merely to the parts actually seen. It cannot, however, be too forcibly impressed on the mind of the reader that the condition is universal in the body. If the lungs could be seen, they, too, would be found with their vessels injected; if the brain and spinal cord could be laid open to view they would be discovered in the same condition; if the stomach, the liver, the spleen, the kidneys, or any other vascular organs or parts, could be laid open to the eye, the vascular enlargement would be equally manifest.

In course of time, in persons accustomed to alcohol, the vascular changes, temporary only in the novice, become confirmed and permanent. The bloom on the nose which characterises the genial toper is the established sign of alcoholic action on vascular structure.

Recently some new physiological inquiries have served to explain the reason why, under alcohol, the heart at first beats so quickly and why the pulses rise. At one time it was imagined that the alcohol acted immediately upon the heart, stimulating it to increased action, and from this idea—false idea, I should say—of the primary action of alcohol, many erroneous conclusions have been drawn. We have now learned that there exist many chemical bodies which act directly by producing a paralysis of the organic nervous supply of the vessels which constitute the minute vascular circuit. These minute vessels when paralysed offer inefficient resistance to the stroke of the heart, and the heart, thus liberated, like the mainspring of a clock from which the resistance has been removed, quickens in action, dilating the minute and feebly-acting vessels, and giving evidence really not of increased but of wasted power.

The phenomena noticed above constitute the first stage of alcoholic action on the body; we may call it the stage of excitement; it corresponds with a similar stage or degree caused by chloroform.

If the action of alcohol be carried further, a new set of changes are induced in another part of the nervous system—the spinal system. Whether this change be due simply to the modification of the circulation in the spinal cord, or to the direct action of the alcohol upon the nervous matter, is not yet known, but the fact of change of function is well marked, and it consists of deficient power of co-ordination of muscular movement. The nervous control of certain of the muscles is lost, and the nervous stimulus is more or less enfeebled. The muscles of the lower lip in the human subject usually fail first of all, then the muscles of the lower limbs, and it is worthy of remark that the flexor muscles give way earlier than the extensors. The muscles themselves by this time are also failing in power; they respond more feebly than is natural to the galvanic stimulus; they, too, are coming under the depressing influence of the paralysing agent, their structure temporarily changed, and their contractile power everywhere reduced. This modification of the animal functions under alcohol marks the second degree of its action. In this degree, in young subjects, there is usually vomiting, and in birds this symptom is invariable. Under chloroform there is produced a degree or stage of action holding the same place in the order of phenomena. The influence of the alcohol continued still longer, the upper portions of the cerebral mass, or larger brain, become implicated. These are the centres of thought and volition, and as they become unbalanced and thrown into chaos, the mind loses equilibrium, and the rational part of the nature of the man gives way before the emotional, passional, or mere organic part. The reason now is off duty, or is fooling with duty, and all the mere animal instincts and sentiments are laid atrociously bare. The coward shows up more craven, the braggart more braggart, the bold more bold, the cruel more cruel, the ignorant more ignorant, the untruthful more untruthful, the carnal more carnal. “*In vino veritas*” expresses faithfully, indeed

even to physiological accuracy, a true condition. The spirits of the emotions are all in revel, and are prepared to rattle over each other in wild disorder; foolish sentimentality, extending to tears, grotesque and meaningless laughter, absurd promises and asservations, inane threats or childish predictions impel the tongue, until at last there is failure of the senses, distortion of the objective realities of life, obscurity, sleep, insensibility, and utter muscular prostration. This constitutes the third stage of alcoholic intoxication. It is the stage of insensibility under chloroform when the surgeon performs his painless task.

While these changes in the action of the nervous system are in progress there is a peculiar modification proceeding in respect to the temperature of the body. For a little time the external or surface temperature is increased, especially in those parts that are unduly charged and flushed with blood. But it is to be observed that, in respect to the mass of the body, the tendency is to a fall of temperature. In the progress towards complete intoxication under alcohol, however, there are, as we have already seen, three degrees or stages. The first is a stage of simple exhilaration, the second of excitement, the third of rambling insensibility, and the fourth, of entire unconsciousness, with muscular prostration. The duration of these states can be modified in the most remarkable manner by the mode of administration; but whether they are developed or recovered from in an hour or a day, they are always present, except in cases where the quantity of alcohol administered is in such an excess that life instantly is endangered or destroyed. In the first, or exhilarative stage, the temperature undergoes a slight increase; in birds a degree Fahrenheit, in mammals half a degree. In the second degree, during which there is vomiting in birds, or attempts at vomiting, the temperature comes back to its natural standard, but soon begins to fall; and during the third degree the decline continues. The third degree fully

established, the temperature falls to its first minimum, and in birds comes down from five and a half to six degrees; in rabbits from two and a half to three degrees. In this condition the animal temperature often remains until there are signs of recovery, viz. conscious or semi-conscious movements, upon which there may be a second fall of temperature of two or even three degrees in birds. In this course of recovery I have seen, for instance, the temperature of a pigeon which had a natural standard of 110 degrees Fahrenheit reduced to 102 degrees. Usually with this depression of force there is a desire for sleep, and with perfect rest in a warm air there is a return of animal heat; but the return is very slow, the space of time required to bring back the natural heat being from three to four times longer than that which was required to reduce it to the minimum.

In these fluctuations of temperature the ordinary influences of the external air play an important part as regards duration of the fluctuation, and to some extent as regards extremes of fluctuation.

These facts respecting fall of temperature of the animal body under alcohol were derived from observations originally taken from the inferior animals; they have been confirmed since by other observers from the human subject. Dr. De Marmion, of King's Bridge, New York, has specially proved this fact in some instances of poisoning by whisky in young children. In one of these examples the temperature of the body fell from the natural standard of 98 degrees Fahrenheit to 94 degrees, in another to 93½ degrees.

Through all the three stages noticed in the above, the decline of animal heat is a steadily progressing phenomenon. It is true that in the first stage the heat of the flushed parts of the body is for a brief time raised, but this is due to greater distribution of blood and increased radiation, not to an actual increment of heat within the body. The mass of the body is cooling, in fact, while the surfaces are more briskly radiating, and soon,

as the supply of heat-motion fails, there is fall of surface temperature also; a fall becoming more decided from hour to hour up to the occurrence of the fourth and final stage, of which I have now to treat.

The fourth degree of alcoholic intoxication is one of collapse of the volitional nervous centres, of the muscular organs under the control of those centres, and of some of the organic or mere animal centres. It is true that while the body lies prostrate under alcohol there are observed certain curious movements of the limbs, but these are not stimulated from the centres of volition, nor are they reflected motions derived from any external stimulus; they are strange automatic movements, as if still in the spinal cord there were some life, and they continue irregularly nearly to the end of the chapter, even when the end is death.

Through the whole of this last stage two centres remain longest true to their duty, the centre that calls into play the respiratory action, and the centre that stimulates the heart. There is then an interval during which there are no movements whatever, save those of the diaphragm and the heart, and when these fail the primary failure is in the breathing muscle: to the last the heart continues in action.

The leading peculiarity of the action of alcohol is the slowness with which the two centres that supply the heart and the great respiratory muscle are affected. In this lies the comparative safety of alcohol: acting evenly and slowly, the different systems of organs die after each other, or together, gently, with the exception of those two on which the continuance of mere animal life depends. But for this provision every deeply intoxicated animal would inevitably die.

It happens, usually, nevertheless, that under favourable circumstances the intoxicated live: the temperature of the body sinks two or three degrees lower, but the alcohol diffusing through all the tissues, and escaping by diffusion and elimination, the living centres are slowly relieved, and so there is

slow return of power. If death actually occurs, the cause of it is condensation of fluid on the bronchial surfaces and arrest of respiration from this purely mechanical cause. The animal is literally drowned in his own secretion.

Such are the stages or degrees of alcoholic narcotism, from the first to the last. And with the description of them, and the order in which they come, my present task is well nigh complete. There arise, however, a few thoughts and suggestions deserving of brief notice.

1. In the first place we gather from the physiological reading of the action of alcohol that the agent is a narcotic. I have compared it throughout to chloroform, and the comparison is good in all respects save one, viz. that alcohol is less fatal than chloroform as an immediate destroyer. It kills certainly in its own way to the extent, according to Dr. De Marmon, of 50,000 persons a year in England, and 10,000 a year in Russia, but its method of killing is slow, indirect, and by painful disease.

2. The well-proven fact that alcohol, when it is taken into the body, reduces the animal temperature, is full of the most important suggestions. The fact shows that alcohol does not in any sense act as a supplier of vital heat as is so commonly supposed, and that it does not prevent the loss of heat as those imagine "who take just a drop to keep out the cold." It shows, on the contrary, that cold and alcohol in their effects on the body run closely together, an opinion most fully confirmed by the experience of those who live or travel in the cold regions of the earth. The experiences of the Arctic voyagers, of the leaders of the great Napoleonic campaign in Russia, of the good monks of St. Bernard, all testify that death from cold is accelerated by its ally, alcohol. Experiments with alcohol in extreme cold tell the like story, while the chilliness of body which succeeds upon even a moderate excess of alcoholic indulgence leads direct to the same indication of truth.

3. The conclusive evidence now in

our possession that alcohol taken into the animal body sets free the heart, so as to cause the excess of motion of which the record has been given above, is proof that the heart, under the frequent influence of alcohol, must undergo deleterious change of structure. It may, indeed, be admitted, in proper fairness, that, when the heart is passing through this rapid movement, it is working under less pressure than when its movements are slow and natural; and this allowance must needs be made, or the inference would be that the organ ought to stop at once in function by the excess of strain put upon it. At the same time, the excess of motion is unquestionably injurious to the heart, and to the body at large: it subjects the body in all its parts to irregularity of supply of blood; it subjects the heart to the same injurious influence; it weakens and, as a necessary consequence, degrades both the body and the heart.

4. Speaking honestly, I cannot, by any argument yet presented to me, admit the alcohols by any sign that should distinguish them from other chemical substances of the exciting and depressing narcotic class. When it is physiologically understood that what is called stimulation or excitement is, in absolute fact, a relaxation, I had nearly said a paralysis, of one of the most important mechanisms in the animal body—the minute, resisting, compensating circulation—we grasp quickly the error in respect to the action of stimulants in which we have been educated, and obtain a clear solution of the well-known experience that all excitement, all passion, leaves, after its departure, lowness of heart, depression of mind, sadness of spirit. We learn, then, in respect to alcohol, that the temporary excitement it produces is at the expense of the animal force, and that the ideas of its being necessary to resort to it, that it may lift up the forces of the animal body into true and firm and even activity, or that it may add something useful to the living tissues, are errors as solemn as they are widely disseminated. In the scientific education of the people no fact is more deserving

of special comment than this fact, that excitement is wasted force, the running down of animal mechanism before it has served out its time of motion.

5. It will be said that alcohol cheers the weary, and that to take a little wine for the stomach's sake is one of those lessons that comes from the deep recesses of human nature. I am not so obstinate as to deny this argument. There are times in the life of man when the heart is oppressed, when the resistance to its motion is excessive, and when blood flows languidly to the centres of life, nervous and muscular. In these moments alcohol cheers. It lets loose the heart from its oppression; it lets flow a brisker current of blood into the failing organs; it aids nutritive changes, and altogether is of temporary service to man. So far alcohol is good, and if its use could be limited to this one action, this one purpose, it would be amongst the most excellent of the gifts of nature to mankind. Unhappily, the border line between this use and the abuse of it, the temptation to extend beyond the use, the habit to apply the use when it is not wanted as readily as when it is wanted, overbalance in the multitude of men the temporary value that attaches truly to alcohol as a physiological agent. Hence alcohol becomes a dangerous instrument even in the hands of the strong and wise; a murderous instrument in the hands of the foolish and weak. Used too frequently, used too excessively, the agent that in moderation cheers the failing body, relaxes its parts too extremely; spoils vital organs; makes the course of the circulation slow, imperfect, irregular; suggests the call for more stimulation; tempts to renewal of the evil, and ruins the mechanism of the healthy animal before its hour for ruin, by natural decay, should be at all near.

6. It is assumed by most persons that alcohol gives strength; and we hear feeble persons saying daily that they are being kept up by stimulants. This means actually that they are being kept down; but the sensation they derive from the immediate action of

the stimulant deceives them and leads them to attribute lasting good to what, in the large majority of cases, is persistent evil. The evidence is all-perfect that alcohol gives no potential power to brain or muscle. During the first stage of its action it may enable a wearied or feeble organism to do brisk work for a short time; it may make the mind briefly brilliant; it may excite muscle to quick action; but it does nothing at its own cost, fills up nothing it has destroyed as it leads to destruction. A fire makes a brilliant sight, but it leaves a desolation; and thus with alcohol.

On the muscular force the very slightest excess of alcoholic influence is injurious. I find by measuring the power of muscle for contraction in the natural state and under alcohol that, so soon as there is a distinct indication of muscular disturbance, there is also indication of muscular failure; and if I wished, by scientific experiment, to spoil for work the most perfect specimen of a working animal, say a horse, without inflicting mechanical injury, I could choose no better agent for the purpose of the experiment than alcohol. But, alas! the readiness with which strong, well-built men slip into general paralysis under the continued influence of this false support, attests how unnecessary it were to put a lower animal to the proof of an experiment. The experiment is a custom, and man is the subject.

7. It may be urged that men take alcohol, nevertheless, take it freely, and yet live; that the adult Swede drinks his average cup of twenty-five gallons of alcohol per year and yet remains on the face of the earth. I admit force even in this argument; for I know that under the persistent use of alcohol there is a secondary provision for the continuance of life. In the confirmed alcoholic the alcohol is in a certain sense so disposed of that it fits, as it were, the body for a long season, nay, becomes part of it; and yet it is silently doing its fatal work: all the organs of the body are slowly being brought into a state of adaptation to receive it and to dispose of it; but in that very preparation

they are themselves undergoing physical changes tending to the destruction of their function, and to perversion of their structure. Thus, the origin of alcoholic phthisis, of cirrhosis of the liver, of degeneration of the kidney, of disease of the membranes of the brain, of disease of the substance of the brain and spinal cord, of degeneration of the heart, and of all those varied modifications of organic parts which the dissector of the human subject so soon learns to observe—almost without concern, and certainly without anything more than commonplace curiosity—as the devastations incident to alcoholic indulgence. Thus the origin of such a report as that of Mr. Everett on the census of America in 1860, related by Dr. De Marmon in the *New York Medical Journal* for December, 1870:—

“For the last ten years the use of spirits has—1. Imposed upon the nation a direct expense of 600,000,000 dollars. 2. Has caused an indirect expense of 600,000,000 dollars. 3. Has destroyed 300,000 lives. 4. Has sent 100,000 children to the poor-houses. 5. Has committed at least 150,000 people into prisons and work-houses. 6. Has made at least 1,000 insane. 7. Has determined at least 2,000 suicides. 8. Has caused the loss, by fire or violence, of at least 10,000,000 dollars’ worth of property. 9. Has made 200,000 widows and 1,000,000 orphans.”

When I sat down to write this essay I noted many points of peculiar scientific interest as deserving my attention, and amongst these one specially important—the question, How alcohol, after it has been taken into the organism, is disposed of, whether by conversion into a new product, by which it ceases to be alcohol, or whether, by leaving the body, as it entered it, an unbroken chemical compound? This question, however important scientifically, is of secondary moment when it is compared with the study of the direct, regular, and almost unvarying action of alcohol upon the body during life, and I have therefore left it in order to place before the mind of my readers the actual in-

fluence of alcohol on the body of the animal that takes it, whatever may become of it after it has entered the body. If in this effort I have shown how far alcohol is really good, and how such value as there is in it is limited at most to the first stage of its action; if I have shown how, being a so-called stimulant, it is not a giver of power; if I have indicated by what slight error in the use of it it is a destroyer of power of the most potent character; and if, from experimental

researches on the physiological action of the agent, I have been able to communicate to the world some facts not being rightly understood, my intention is carried out. I hope, moreover, the intention is carried out with benefit to the greatest of all social efforts, the effort to reduce alcohol to its legitimate application as an instrument for some good and most evil in the possession of man.—*Popular Science Review*, April, 1872.



## ASYLUMS FOR DRUNKARDS.

By D. DALRYMPLE, M.P.

IN the August number of this magazine for the year 1870, a lively and able article on the "Rational Treatment of Drunkards" attracted much attention. We know that the late author of that paper was indebted for his information to the investigation and evidence of others, and though he put the materials furnished into a very useful and attractive form, it lacked the reality of personal observations. While, however, we possess the advantages of recent direct inspection and close observation of these institutions in America, our article must suffer from the loss of novelty and freshness which our predecessor enjoyed.

The importance of the question—"What is to be done with our drunkards?" is growing by year and by month into graver and yet graver importance; and those who two or three sessions ago treated legislation on this subject as impossible, or at best as an amiable but weak enthusiasm, have come to see that it must be dealt with, and that Great Britain cannot longer endure the reproach of being at once one of the most intemperate of nations, and one of the least active to mitigate the evil.

If any excuse were needed for bringing this topic up again in the midst of the fierce strife between Teetotaler and Licensed Victualler, between Sir

Wilfrid Lawson and Mr. Bass, it will be found in the fact that it belongs to neither party. Whether the prohibition of liquor traffic, or its regulation, will ultimately prevail, is not present to the minds of the promoters of Reformatories for Inebriates; they believe, nay, they know, that in either event there will be plenty for them to do; and while Greek and Trojan contend for mastery, there lies a helpless mass of habitual drunkards full before them, and in abundance of instances imploring that aid which as yet is nowhere to be found.

We desire in this paper to show what the work now carried on in America is worth, what is being achieved, how it is effected, and what can be done when rulers rise to a proper sense of their duties, and when the action of philanthropic societies passes into State hands and receives public recognition.

There are at this time in America nine "public" recognised institutions for the treatment of habitual drunkards. There is only one in Canada. The word "public" is applied to those only which have received charters, or are incorporated, or receive subventions from their respective States.

No private establishments, or lunatic asylums which receive inebriates, are included in this survey. Eight of these nine were visited and closely

inspected ; the ninth, lying at the great distance of San Francisco, was omitted. These institutions are scattered over a tract of country stretching from Quebec to Chicago, from Boston to Baltimore, and present, as may well be supposed, various and marked differences.

It would be unprofitable, perhaps impossible, to give each visit in all its details, and we prefer to group them into—

1. Those mainly destined for the higher classes, and for the upper half of the middle ones (for there are these distinctions even in America).

2. Those which receive the lower half of the middle and artisan classes.

3. Those to which patients are sent who are committed by judicial action instead of being sent to a gaol.

The first will be best represented by Binghampton, in the State of New York, and by Media, in that of Pennsylvania ; the second by the Washington Homes of Boston and Chicago ; the last by Ward's Island, in New York, and Shore Sound, for King's County.

From all these we personally obtained the fullest information ; neither failures were concealed, nor success paraded ; while much valuable testimony was obtained from the patients themselves in the Reformatories. We have many a time had occasion to analyse reports and check lists of results, and the wisdom of large deductions is familiar to us ; but never have we met gentlemen less disposed to overrate their own valuable work, or the products of it : the disposition was in the contrary direction. We took several occasions to test these statements by the judgment of those living among the very classes who furnish the patients to these institutions, by the often hostile criticisms of those whose interests were assailed or thought to be so, and by the statements of those who had been inmates, once or oftener, in one or more establishments, as well as of former superintendents and managers. Therefore the results which will be now placed before the public may be regarded as moderate, fair, and reliable.

Binghampton and Media are both admirably placed, and adapted to their purposes ; Boston and Chicago, to our judgment, very much the reverse, though, as will be seen later, there are contingent advantages connected with particular classes of inmates.

Ward's Island is a Government establishment, and placed, as its name implies, on an island, devoted entirely to reformatory and industrial objects, and inaccessible to the general public without a special order or pass.

At the time of our visit to Binghampton, there were eighty patients, all there, we believe, without exception, either voluntarily or at the instance of their friends. There were then no committed patients. The comfort, order, and harmony that pervaded the place were remarkable, while the readiness with which the somewhat stringent regulations were obeyed was not less so.

Prayers, morning and evening, are read by the chaplain ; hymns admirably sung, music played, and the choir conducted by *patients*. The meals were taken in common, and varied in no respect from those in all the hotels of America. There was an admirable library, billiards, smoking-rooms, and all the comforts of a club, while each individual's room was for the time being his own, and decorated according to his taste or fancy. The most remarkable feature was the absence of all appearance of being patients, while the readiness with which they all combined to help each other was admirable. One of the rules is, "that no one goes beyond the grounds, which are very extensive, till he has by eight weeks' sojourn and obedience shown to the superintendent his power to restrain his appetite for drink," and then he has leave for certain days and hours. If he comes back, as is sometimes the case, having broken his promise and got liquor, his leave is stopped ; and if he goes out in violation of this restriction, he is dismissed. We witnessed a touching instance of the influence brought to bear by one patient on another.

We heard one say, "Come along ;

we have got our leave to go to the town to-day: let us be away." The other replied, "I wish to go; but I doubt whether I can keep out of bar if I do." "Well," was the answer, "we will not go to town, but we will be off into the woods, and be back to dinner;" and they were.

During our stay the Literary Club held its weekly meeting, and presented a very remarkable scene. The president was a distinguished Southern officer, who at the battle of Bull's Run commanded a battery that kept the Northern hosts in check for hours; he discoursed of the institution, and what it had done for himself and others, in the somewhat florid style of American oratory, but which was good evidence of the calibre of his intellect, and how greatly its preservation was to be desired. Another told us how he had "graduated in drink in every country in the world:" how British beer and gin, the French absinthe and eau de vie, Chinese samshoo, Mexican palque, &c., had been swallowed wholesale by him in their respective countries. He also had fought in the tented-field, and had passed through the bloody war that ended with the murder of Maximilian.

Of such materials as these were the inmates composed, and it may be well imagined that reason and argument would go far to rule such men; but we had to ask them the question, How far do you who go beyond the grounds, and down to the town, refrain from drink? Their answer was, Many break down, and there are the recurring paroxysms of internal craving for drink, against which all arguments, all entreaties are futile, and the most solemn promise as the idle wind. It is for such as these that the talented and cautious superintendent, Dr. Dodge, asks for the power to turn the key upon them. Such detentions need not be long: each recurring paroxysm will be shorter and less intense, while medicine and diet will aid in curtailing it. No such power, however, exists at Binghampton, except for committed cases; and if a patient breaks out, the

only resource is his dismissal. Here let us remark that not one single superintendent, even those who regard the "parole" system as the best, but asks for the power to lock his patient's door.

As at Binghampton, so at Media, near Philadelphia, the patients belong to the upper and better middle classes. Like Binghampton, it is charmingly situated, and has for its superintendent one of the most instructed, experienced, and cautious of those physicians who have turned their attention to this subject in America. Dr. Parrish, while giving the parole system every credit, declares his desire to be able to prevent the going out of bounds of those who are driven by the recurring craving for drink to break their most solemn vows. He says, that the very fact that the patient knows that such a power exists will in most instances suffice.

We will now spend a short time in the Washingtonian Homes of Boston and Chicago, representing, as they do, the institutions located in the heart of a great city.

To our ideas nothing can be less suitable to such an institution than the noisy thoroughfare of a bustling, pushing, commercial city, with grog-shops and lager-beer saloons on all sides, so that the inhabitants can witness carts and drays unloading their stores of coveted but fatal drink under their very noses. Yet this defect is only partially admitted by the managers, who fall back on the advantages afforded to those who are sufficiently well to do it, for obtaining work. They argue that such an institution should be in a city, for the reason that many patients, after a comparatively short time, are able to go about on their business partially or wholly, though not in a fit condition to leave the Home altogether. It is better, they say, that they should gain health and strength as much as possible surrounded by old temptations, and among those who feel a personal interest in their welfare—who are to give them work or business in the future; that they should become accustomed to new

companions, associations, and thus learn to shun drinking places and all connected therewith.

A similar line of argument was used to us when we visited the Washingtonian Home at Chicago, which is still more unfavourably situated than that at Boston; nevertheless, the superintendents at both were anxious for buildings more in accordance with modern requirements, and with better hospital accommodations. These reasons, given almost in their own words, are a curious contrast to the arguments used by the Permissive Bill advocates, who would shut up every drink-shop, and place no reliance on education, moral principles, or common sense being able to teach men not to abuse drink.

Whether the system of interdiction of drink has anywhere done as much good as the moral restraint system of the Washingtonian Home at Boston may be a debateable point; but as evidence of what the latter has done we quote from a report made last year by a Commission appointed by the Commonwealth of Massachusetts to examine into the working of this institution:—

“The Washingtonian Home was first organised under the name of the Home for the Fallen, November 5th, 1857. It was reorganised under an Act of Legislature, and approved, March 26th, 1859.

“Its resources at the commencement were small and scanty, and the effort at its commencement was emphatically an experiment; but the experience of over twelve years proves it a most successful experiment.

“Up to the 1st of November, 1870, 3,462 patients had been treated: of these, one-third to one-half are believed to have been thoroughly reformed, and a large portion of the remaining half benefited.

“In this way large numbers have been restored to society as industrious and useful members. A large number also of those who are reformed become active missionaries among their old companions. In this way it is estimated, after careful inquiry, that as many more are restored.”

These are weighty facts, if they are such: that they are recorded in the Report of a State Commission is, we think, sufficient evidence of their correctness.

We had heard these cures called in question, and therefore we took special pains to ascertain whether they were merely written off the books when they left the Home, and no further heed taken of them, or whether any watch was kept on their future conduct, so as to test the permanence of the reform.

The superintendent, Mr. Lawrence, who has filled the office several years with great credit, stated that he never wrote a man down as cured till he knew (so far at least as he was able to trace him) that he had re-entered life and resumed his position without relapsing into drink.

All this was repeated to us by Dr. A. Day, a former superintendent at Boston, and elsewhere, and confirmed by some direct evidence worthy to be recorded.

We visited the Home one evening, about eight o'clock, and found some sixty or seventy people, of both sexes, and all ages, assembled in a large room. These were either patients at that time in the Home, or those who had been; with their wives, children, and friends. After a hymn sung, and a chapter of the Bible read, some of these persons detailed their history, before, during, and after their sojourn in the Home.

Without any parade, without any exhibitions of notorious offenders rescued, such as have affronted and alienated many a sincere social reformer in this country, they gave histories as touching as would furnish forth many a novel.

There were two in particular, whose lives presented true pictures of the downward course of an habitual drunkard. The fall into drink, the endeavour to rise out of it, the virtuous resolve made and broken, the backsliding into vice, another desperate spasmodic effort, and again a fall, until help afforded and prolonged for a sufficient period—help medicinal, moral, and social—such help as

is designed and actually rendered by these institutions—had rescued them from perdition.

One man stated that he had never been sober for five months at a time, for twenty-five years, till he came into an Inebriate Asylum, since which, for more than five years, he had never touched drink. Another, who was at the time an assistant in an asylum, stated that he had made several fortunes and lost them through drink; but that after a long struggle, in which, unaided, he must have succumbed, he succeeded in mastering the habit, and for nearly seven years had entirely abstained. We learned that this meeting was weekly and public, and that the reports on the progress of patients who had lately left, were constantly made at these times and recorded. At Chicago, an annual public meeting is held in addition, at which many of those who have been rescued, and who now hold high positions in the Senate, in the Church, in Law, Medicine, and Commerce, attend and urge forward the efforts of the Institution.

We asked whether there were not relapses. The reply was, many. "They come in and go out, and come in again and again, but they are never refused admission, nor do I ever despair," said Mr. Lawrence. In a great majority of the relapses the patient had left too soon: over-confident in his good intentions he courted temptation, and quickly fell; or some great trouble or heavy sorrow fell on him; and he fled to drink for consolation.

There yet remains a certain and notable proportion of those who never are cured, and to these we shall advert hereafter, when treating of the several classes of institutions needed. These are found to be either those who have been so long habitual drinkers that their organs are diseased by alcohol, or those who have inherited a mania for drink (as any other form of insanity is inherited), or those whose low brutal type it is impossible to elevate beyond mere animal enjoyment. What is best to be done with these is a problem that society must some day solve, but

which we do not here stop to discuss.

The same Commission gives an estimate of the number of habitual drunkards, that is, of those who have lost their power of self-control, to be 600,000 in America. In the State of Massachusetts alone there are 23,000: of this number, 10 per cent. or 2,300 die yearly a drunkard's death, while an equal number of recruits is yearly found to take their places. There are also calculations of what is lost in material advantages by maintaining such an army of drunkards, what is lost in the shape of wages, &c.; but this would lead us too much into wearisome figures to induce us to reproduce them here.

We will now pass to the third class, or those who are sent by magisterial authority or by committal to Inebriate Reformatories exclusively belonging to the State.

Of these there are but two—Ward's Island, and Shore Sound, Long Island—neither of which indeed is wholly devoted to committed patients, but likewise receives those who pay.

Admirable as is the management at these, yet it does appear to us a great mistake to have both classes under one roof. We can understand the plea that the profits of the paying patients help to defray the cost of the committed ones; but as we were informed at Ward's Island and elsewhere that the labour of the committed patients paid, and more than paid, their cost, this plea will not avail.

We noticed among the boarders, men to whom the very possible contact with a committed patient would be most humiliating; though the same cause brought both there, and the object of both is the same. The feeling may be stronger to us than to an American, whose theory of equality may make it more tolerable, but we believe it to be for the real advantage of both that the treatment of the two should be carried on in different places, and in this we are confirmed by the opinions of many eminent authorities.

To these institutions patients are

sent—either by “the committal of the person of an habitual drunkard, or by the warrant of a justice, upon being satisfied, according to their law, that he is an habitual drunkard and incapable,—for such a term, not exceeding one year, as the justice may deem proper.”

Similar enactments are to be found in the Acts of Incorporation of the Chicago, Pennsylvanian, and Maryland establishments; but it has been found to work so ill, that the clause remains a dead letter. The results of Ward's Island have not yet reached us, and we have reason to fear that all the Chicago documents perished in the late conflagration.

Dr. Adams's statement, however, amounted to this—that all the work of all the establishment at Ward's Island, the grounds and gardens included, was done by the patients, and that the value of the labour more than repaid the cost; that many were reformed, and that many more would be but for two reasons:—one, that the justices hardly ever sent any but very confirmed cases to Ward's Island, it being so much easier to carry out the sentence by a fine,\* or twenty-one days in the House of Correction; the other, that no provision was made for placing those who were discharged in positions favourable to sober habits, so that they went back to their old haunts to relapse into their old vices:—that, nevertheless, while residing in a Reformatory they are profitable to society, which was certainly not the case before or while in gaol; that for a whole year they are kept from crime, during which time they acquired a knowledge of an occupation and habits of industry to which they had long been strangers.

The Brooklyn or Shore Sound Asylum has not been very long at work, but such have been the results that the State has acquired extensive grounds, and is now erecting large buildings, to extend its operations.

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\* In some States of America a portion of each fine from a drunkard goes into the magistrate's pocket.

Since its organisation, 555 admissions, including 94 re-admissions (and 59 persons re-admitted), have taken place. Of this number, 350 had been previously in prison for drunkenness, and 85 were transferred by process of law from the prison to the Home. The director, the Rev. Mr. Willett, stated that, though unable, from the majority of the patients moving away in search of fresh employment and new associations, to give accurate figures of the cures, yet he fully believes that one-third are permanently cured.

We have now described, as fully as our limits will permit, the existing institutions and their work; but there is one feature in the treatment of inebriates which we mention only to reprobate, and we have reason to know the system is not confined to America. It is very common there to place inebriates in ordinary lunatic asylums. This is frequently done during a period of mania (delirium tremens), and so far as a ready resource for momentary needs, well and good (in England there is no other resource); but they are often kept there long after their sanity is restored. Now, we hold this to be as intolerable as it is illegal. To keep a man who is on all points sane—his propensity to drink to excess excepted—in company with, or at least in the same building with melancholics, monomaniacs, suicides, or the demented, is cruel to both. In other cases, parties are got to sign an agreement to enter an asylum and stay there for a fixed period, and thus evade the law which makes proper certificates imperative. Whether the large profits said to result from this practice in America go into the coffers of the asylum or into the pockets of the officers, we do not pretend to say, but we shall never forget the scathing terms in which a venerable and highly-honoured physician at Baltimore denounced so mischievous, cruel, and dishonest a system.

We have not as yet mentioned Canada in reference to this subject, though the legislation there is valuable and extensive; but to do so now

would exceed our limits, and carry us into legislative questions which here at least we purposely avoid. It may be that in another paper we may venture on this large and difficult controversy.

We have now to look at the reverse of the picture, and to state fairly and frankly what has been urged against these Reformatory Institutions.

The objections are mainly that they are not sufficiently comprehensive, nor the powers sufficiently stringent; that the cures are neither so lasting nor so numerous as reported; that liquor is clandestinely imported by patients or others, and evasions facilitated. No objection has ever been raised from the liberty-of-the-subject point of view, nor that persons have been unkindly treated, or from interested motives improperly placed in a Reformatory. Nor has abuse of power been charged on those who direct the asylums.

The stability and duration of the cures, then, is the main objection; and from all we have met, we could get no more definite statement than that they knew A. B. and C. D. had been in this, that, and the other asylum or home, and yet continued a helpless drunkard.

If it is borne in mind that one-half or one-third of all the admissions only are claimed as cures, there is plenty of margin to account for these failures. There is no doubt that many who are believed to be cured return again to drink, and never are really restored; but when it is remembered how long many of these had been sots before they came under any treatment, how liquor-soaked their every organ was, how impregnated with the poison of alcohol every tissue and fibre of their frame had become, then add the want of power to retain them longer than they like to stay (except in committed cases), and the wonder will be, not that the permanent reformations are so few, but that they should be so many. The power to retain for a period adequate to confirm a cure is the key of the whole question, the pivot on which it turns; and so strongly is this felt, that at a meeting

of the American Association for the Cure of Inebriates, held on the 14th of November, 1871, the following resolution, which has just reached us, was carried:—

“That it is desirable to give legal power to institutions for inebriates to retain their patients until, in the judgment of the proper officers of these establishments, such patients are restored to health.”

Grant this power, and not only can the man whose craving overmasters his resolution be kept from going out at the wrong moment, but the secret importer of liquor who has leave to go to town can be stopped if detected in the act, and the gates closed against any who are disreputable enough to supply those inside.

It is impossible to rate too highly the importance of preventing this secret traffic, for not only does it keep certain patients under a chronic state of alcoholism, but it places temptation before those who sought seclusion to avoid it.

It was also resolved that a bill should be introduced into Congress this session, based on that brought forward in the House of Commons last session by myself, granting the requisite statutory powers to carry out this intention. This measure, or rather the whole question of what to do with our habitual drunkards, is before a Select Committee, and we hope powers will be taken sufficiently large to make the inquiry complete and exhaustive; that not only papers and records will be produced, but that those who have worked such institutions, whether with success or failure, will be examined.

Let the State once realise that the destructive influence which alcoholism exerts upon life and property is as curable as other diseases, and asylums will be established for the treatment of it, and laws enacted to protect society against a scourge which destroys more lives, ruins more souls, desolates more hearths, than cholera, small-pox, or typhus fever, for which such abundant provision is now made.

—*Macmillan's Magazine*, June, 1872.

## ARCHBISHOP MANNING ON THE INFLUENCE OF ALCOHOL UPON THE WILL.

At the Annual Conversazione of the National Temperance League in the City Terminus Hotel, Cannon Street, on Wednesday, 29th May, Mr. Samuel Bowly in the chair—

The Most Rev. Archbishop MANNING said: Mr. Chairman, you only did me justice when you said that I sympathise in the purpose which brings you here together to-night. Indeed, I think I may say that whatever aims to put down or to diminish, in the least degree, the evil which at this moment is destroying men and women and children and homes and the foundations of our society, both domestic and political, I have at heart as deeply and as warmly, I think I may say, as any one who is present. I unite most cordially in the words which you, sir, have spoken on the duty, and, I may say, the happiness, of entering cordially into co-operation in all those things where our union is possible for the welfare of our people, and it seems to me that that field is very wide, and those subjects are very many, and that it is not only our duty, but it is our true happiness, to be able to meet together as we do to-night. You have called on me very early in the proceedings of this evening, as if you expected me to say something that would be either new or worth the hearing of this assembly. Now, I really am not able, and I do not think I have the command of speech as many that are around me have, to be able to discharge such a task. If I rightly understand the purpose which brings you together, it is this: it is not so much to talk of drunkenness or intemperance in those grosser and more excessive forms in which they are to be found among, I will say, certain classes and families throughout this country, but to deal with what is a far more subtle, and, I may say, a far nearer, evil to ourselves—I mean the free and over-free use of those stimulants which, when used in the gross excess of which I have spoken, pro-

duce what all men in this day are uniting with one voice to declare to be an intolerable and a devouring evil—I mean the habits of intoxication of our people. We are met, therefore, to speak of something much more refined, and if I understand rightly the invitation which my friend Mr. Rae gave me, it is this: that we are dealing with those habits which are not openly censured, because they are not openly known. They pass under the eyes of society without being detected. Nevertheless, they do two things. They set an ill example, and they progressively form the worst habits of excess. I suppose we are met rather to speak of this. Now, I believe I am rightly informed when I say that there are three ways by which people fall into these habits. The first is that they deliberately do it with their eyes open. The second is that they have inherited some of those subtle and strong natural constitutional traits which break out in the posterity of families. I am informed by the highest scientific authorities, that they will come out in the form of paralysis, sometimes in the form of insanity, sometimes in the form of excessive drinking, and that this is partly the case why a number of persons strangely, and in some unforeseen way, begin to contract habits of this kind, which their nearest friends cannot understand. Well, that may be; but I believe the third and last cause we have got to deal with, because it is a voluntary cause, is, that unconsciously and insensibly, and from want of proper self-denial, and want of that reasonable use of food, and the measuring of the quantities of food to the necessities of life, people are led into self-indulgence in the matter of intoxicating drinks, and by that I mean the wine which is on our table, and those other kinds of stimulants which are commonly used in society. Now, I pass over entirely the effect of these habits upon the religious character.

Of this, I will say but one word. I do not think that anybody who uses any drink whatsoever so as to draw so much as a cloud over the brightness of his intelligence can possibly fail to suffer in his religious character. That great gift of God which is in us, I mean the reason or the conscience—what is it? It is the reason judging of right and wrong, and the moral sense, as we call it, responding to that judgment. If men using any kind of intoxicating drinks should suspend the clearness of the discernment of their reason and their conscience, they have abused it, and therefore I think it is a much finer question than people are wont to conceive. Though they have committed no gross excess, they have done a wrong, for I cannot think that anybody can obscure the image of God in his soul by clouding his reason in any degree without doing that which is morally wrong. I will only add to this part of the subject, that we never can affect our intellectual clearness without at the same time clouding our moral discernment, and whatever affects the intellect or the intelligence works itself out at last in some moral result; and though it may grow slowly like a poisonous seed, it will grow surely; it will root itself, and will spring and spread its effect through the whole character. I must not dwell more upon this, nor shall I go into the question of the effect of this upon domestic life. The world is full of sorrows, miseries, and heartbreakings, which physicians know, which the clergy know, and which all ministers of religion know, which the world does not know, and the neighbour on the right and left perhaps never suspects. Husbands and wives, fathers and mothers, sons and daughters, know the domestic miseries which break up the peace of homes; coming from this one cause. Remember, I am now speaking of the upper and middle classes. We all know what happens in the poorer classes, but we have agreed not to dwell upon that. I am now speaking of those who are in our own condition of life. The miseries, the domestic discords,

the loss of affection, the loss of all peace in homes, the misconduct of children, the ruin of fortunes, and the infliction of sorrows which only those who are educated and refined can feel with the greatest degree of sensitiveness—I believe the extent of all this is known to God only—and I do not hesitate in ascribing this (I speak from my own knowledge) to these secret habits of indulging in stimulants which gradually overcome the reason, overcome the will, and bring on such grievous domestic and personal evils as break up the happiness of homes. It is difficult for us to give examples, because in giving examples we should describe cases. I must ask you to believe that what I say I literally have had before me for years and years, and could verify by facts. I have known persons of great intellect, high cultivation, and amiable character, and I will go further, and say I have known persons of truly religious instincts and of habits of piety, gradually form practices of this kind and that, insensibly, so as to become at last a source of sorrow to their whole house, and misery to themselves, thereby inducing disease, and the proximate causes of death. I have before me at this moment many whom I know to have wrecked themselves altogether—beginning, as I have before said, with intellect, cultivation, high character, and everything that makes life useful and happy. They have wrecked themselves by this one cause; and I may in passing—and I must not be restrained by the presence of physicians, though I am safe in one sense, because all the physicians here would be on my side—but among physicians, I am sorry to know, that for generations there have been men who from a false tradition of medical practice, as I quite believe, but also from a want of firm and masculine truthfulness in dealing with their patients, have either recommended the use of stimulants, or tolerated it, and by their toleration have encouraged it even to the destruction of the patient. This I say upon the authority of medical books, as well

as upon the authority of medical men, and I am profoundly convinced that in the medical profession there has been for a long period of years a most dangerous and mischievous malpractice, which I believe ought to have been treated by law, and could have been brought within the jurisdiction of law, whereby physicians have advised the use of stimulants under the idea of keeping up strength, of restoring the functions of nature, and the like. Now, I do not deny that it might have such uses as these. I believe that if a man has been all but drowned, the application of hot bricks to his feet will have a beneficial effect, and that in certain cases a mustard poultice would be of advantage; and therefore it is possible, as medical men may say, that the use of some such medicine, as medicine, in the way of stimulant, may have its effect, but that it is necessary for ordinary food nothing can induce me to believe. Nature is not so niggardly nor so unwise as to have left us in this state without ministering sufficiently to the necessities of health and life. I firmly believe that these pleas of the necessity of such stimulants for common food are founded upon a false basis. I know that in saying this to you I am preaching to the converted, which is a very easy task, for you are not likely to be led away by the idea that these things are necessary, but I wish that we should be convinced, and very firmly convinced, that they are not necessary, and that we should be more firm and resolute preachers of that doctrine to other people. The only point on which I would add a few words is this: I was reading the other day an article which had been extracted from the *Popular Science Review*, and I have no doubt it has been in the hands of most who hear me—I mean an article by Dr. Richardson, in which he traces out the physical effect of the use of stimulants, and by a very interesting and curious series of experiments has proved that alcohol produces in the human system such an acceleration of the heart as to make it do one-third more work than nature intended it to do; that is to

say, to put it in the way in which he describes it, that the action in the heart during twenty-four hours would lift 122 tons a foot high, but that under the action of alcohol it would lift 180 tons to the same height; that is to say, that the heart is forced to do this overwork. Now, if you will imagine a fly-wheel which is accelerated one-third beyond its proper speed, you will understand how much sooner it wears out. That is precisely what is going on in the human system. My purpose, however, is not so much to speak of the physical effect, for I wish to speak chiefly of the moral effect of the use of these stimulants upon the mind and upon the will. The description which he gives is this: that the effect of these things is to affect the upper brain, which is the seat of thought and of will, and that when the upper brain becomes affected it loses its power of control, and that the emotions, the passions, the sensibilities, and the imagination are set into a violent activity. I remember reading some time ago of a region in the South of France where there is a large tract of sandy country, and at certain periods of the year there are whirlwinds which catch the sand, obscure the air, and violent agitation and furious movements fill the whole country, and the people call it the witches' holiday. Now, he describes the state of mind in a person whose upper brain has been affected very much in this way. As the imaginations, the feelings, the sensibilities, and emotions have been entirely let loose from control, become vehement and furious in their action, and finally destroy self-control and reasonableness of character. The next effect is this, that the will we possess, and which was given us by our Creator and, if we use it faithfully, aided by His help, has the power of controlling our whole mind and action, both external and internal, loses its control power just as excess weakens the muscles and the powers of control over the limbs, so the power over the will is weakened, and men at last get into a state in which, knowing with the most clear reason, and condemning with the most certain conscience

the use of these things, they have lost the power of will to control themselves. I remember reading an anecdote in the life of Mr. Coleridge, who, as is known, took at one time to opium-eating. Desiring earnestly to break himself of the habit, he engaged a man, and paid him to be always at his side to prevent his getting opium, but the craving for it was so great, and the use of it had so completely undermined his powers of will, that he used to spend his time in cheating his keeper. He used to give him the slip, and watch for opportunities to escape from him that he might get opium. On one occasion he took him down to the port of Bristol, close to a chemist's shop. He then pointed out a ship lying in the water with a flag flying, and said, "There is a Dane," and his keeper said, "No, it is not, it is a Swede;" he said, "It is a Dane," and he quarrelled with him, and laid him a bet of five shillings that it was a Dane. He then said, "Go on and see." The keeper did so, while in the meantime, Coleridge went into the chemist's shop and filled his pockets with opium. This is precisely what happens to persons when they take to the use of these stimulants. The will loses control over itself, and while the conscience is dictating most clearly what they ought to do, they have not the self-control and perseverance to fulfil its bidding, until at last this has come to my experience: I have known persons to stand before me and promise in the most solemn manner that they would cease from taking stimulants: they have left the room, and within an hour have been found in places of drink. At the time they spoke I believe their intention was sincere, but the moment they had turned their back, the powers of their will gave way. They had lost their powers of self-control, for the drink is the solvent of the will. Alcohol is a sharp corrosive. As acid will destroy the nature of a substance, so the use of these things destroys the substance of the will. I have fulfilled a promise that I made to Mr. Rae, and if I have been both dull and dry, I lay all the blame upon him, and he will know how to

get himself out of the difficulty. He asked me to say something on the moral effect produced on the mind and on the powers of the will and self-control by the use of these things, and I have endeavoured to do so. Let me now say that I have not been speaking of excessive drunkenness, but of that sort of free indulgence which often passes without detection. I believe that if those who use these things were to use them as food they would take a quantity considerably reduced, and that they would become temperance men at last, and would border very closely upon us who abstain from them altogether. Do not imagine that by what I have been saying now I am pleading for the moderate use. I am not. I would to God that we were all united in giving the things up, and my reason is this: they are things abused with such exceeding facility that I believe safety lies in keeping at the greatest distance from them, and I am perfectly sure that for the multitude of men the only safety is in renouncing them. There are three classes of people to whom I would apply what I have been saying, and to whom I would apply it very earnestly before I finish. The first class are those who have got to teach others. I believe that if we are to teach others, and have any effect whatever upon others, we must begin by our example, and that there is no good even in talking to a drunkard if that man can retort upon us, "Why, you take it yourself!" I believe that any man, even if he is the most lost and abandoned of drunkards, will listen far more readily to a man who says, "This is a useless thing; I have long found it to be unnecessary; I have long renounced it; and I would rather never again put anything into my mouth which can be the occasion of stumbling and falling to any of my brethren." This I believe to be the first condition to have an influence over others to induce them to renounce or even to use it in moderation. Of this I am sure, that if temperance is to be kept up, it must be kept up by abstinence. Another class are parents. If fathers and mothers would only begin by early setting

the example themselves, to induce their children in childhood to love the taste of water, and not to know the taste of other drinks, they would save them from a multitude of sorrows and a multitude of dangers. Abstinence begun in childhood makes abstinence not only easy but sweet when they grow up to youth, and it gives them strength and joy in persevering to the end of life. The third class to whom I would speak are not here; I would say to children, as it is often my duty to say in my schools and elsewhere, "Begin early and have nothing to do with it. Begin early, and from the first renounce it altogether, and renounce it upon the highest of all principles. Don't do it because you will have better clothes or a better home. These are very good motives to be used by some people, but we shall never do acts of this sort, which involve self-

denial, with any sustained purity of motive or firm perseverance, unless we do them upon the highest motive of all," and, therefore, I hope that all parents who hear me, will allow me to give them this short advice:—Try and teach your children from the beginning to do without these things altogether; spontaneously to say: "I would rather never know anything about them, never taste them." In this way I believe the multitude of total abstainers will be continually growing in the midst of us, and if drunkenness in any class, and in the working-class especially, is to be diminished even, or if it is ever to be put down, it will be by the moral influence of those who have absolutely and altogether renounced the use of these things.

The Archbishop, who was most attentively listened to, sat down amidst much applause.



## ON INTEMPERANCE AS A CAUSE OF CHRONIC BRIGHT'S DISEASE.\*

By WILLIAM ROBERTS, M.D., F.R.C.P., *Physician to the Manchester Royal Infirmary.*

DR. DICKINSON, in his recent able work on *Albuminuria*, has called in question the generally received opinion that the abuse of ardent spirits is, either alone or as reinforcing other etiological conditions, one of the most important causes of chronic Bright's disease. In an elaborate chapter he adduces a considerable array of statements and figures which have led him to the conclusion that, setting aside the cases associated with gout, alcohol has but a slight and remote effect in producing degeneration of the kidneys. This opinion, coming from such a quarter, and apparently supported strongly by facts, is likely to have a considerable influence on the minds

of the next generation of practitioners, and, if it be an unsound opinion, is sure to lead to serious mischief in practice. This is the reason why I have considered it desirable to examine the evidence on which this opinion is grounded, and to bring the results of my inquiries under the notice of the Section.

The evidence hitherto relied on by writers on renal disease, in proof of the evil effects of alcohol on the kidneys, is of the same kind as that which is held sufficient to establish the connection between intemperance and cirrhosis of the liver—namely, the fact that a large number of drunkards and intemperate persons are found among the subjects of chronic Bright's disease. Not only has this connection been recognised by all writers on Bright's disease in this country and

\* Read before the Medical Section at the Annual Meeting of the British Medical Association in Plymouth, August, 1871.

America, where intemperance is rife, but even in Germany and France, where the vice, at least in the form of spirit-drinking, is less prevalent than with us. The morbus Brightii of drunkards is a well understood type of disease among German writers. The impression that has grown on my own mind from an experience of several years both in public and private practice—much of which has been among patients suffering from renal disorders—is very strong that the intemperate, if they escape the earlier perils of delirium tremens, cirrhosis, and alcoholic phthisis, fall victims in large numbers, in their later years, to renal degeneration.

My present purpose, however, is not to set forth the facts which support the old opinion, but to show the inadequacy of the arguments brought

forward by Dr. Dickinson in support of the contrary and new one.

The first kind of evidence adduced by Dr. Dickinson is based on the results of *post mortem* examinations of persons who had died of delirium tremens, or of individuals who, having been notorious drunkards, met with a violent death.

From the records of St. George's Hospital he obtained the details of the *post mortem* examinations of fifty-two adult males who had died of delirium tremens. From the same sources he took, for comparison, the same number of examinations of adult males who had met with accidental death, excluding such as had been notoriously drunken. The state of the kidneys in these two sets of cases is shown in the following table:—

	Delirium Tremens (average age, 38).	Accident (average age, 41).
Natural .....	28	32
Congested .....	14	5
Slight or uncertain changes in the cortex..	3	1
Large, smooth, mottled .....	3	1
Granular surfaces .....	3	6
Cysts, without other changes.. ..	1	7

The first thing that strikes one in examining this table is, not the slightness of the alterations in the delirium tremens cases, but the enormous proportion of serious organic disease in the accident cases. Is it to be believed that one in every seven or eight presumably healthy persons of the average age of 41 is the subject of granular kidney, or of the large smooth mottled kidney? This point alone would seem sufficient to fatally vitiate these observations. If the delirium tremens cases be taken by themselves, they present a sufficiently strong indication of the evil effects of alcohol on the kidneys. In nine cases, serious changes, either advanced or incipient, existed in the kidneys; in fourteen cases, there was congestion; and a perfectly natural state existed only in a little more than one-half. It is to

be borne in mind that renal degeneration is usually a late event in the life of the intemperate; and that, consequently, the signs of renal disease in those who die at an average age of 41 might be expected to be found, for the most part, only in an incipient stage.

Dr. Dickinson next refers to the papers of Dr. Ogston, of Aberdeen, who has minutely recorded the *post mortem* appearances of a chronic kind met with in the bodies—first, of seventy-three persons who were notoriously intemperate, and who had perished suddenly from the effects of accident, suicide, or homicide, and while apparently in ordinary health and activity; and, secondly, of forty-four additional persons of the same habits, who had also perished suddenly while apparently in ordinary

health, but whose death was more directly traceable to the abuse of stimuli. The changes found in the kidneys are thus tabulated by Dr. Ogston:—

*First Series—73 cases, average age about 43 years.*

General fatty degeneration in 1 case.

Hyperæmia in 4 cases.

Hypertrophy in 13 cases (in 5, lobulated; in 2, the cortices pale and attenuated; in 2, with yellow patches of fatty degeneration over the cortices; in 1, with partial obliteration of the tubuli; in 2, with granular surfaces; in 1, with (12) pus-depôts in one kidney; coincidently in 1, with albuminous urine).

Atrophy in 1 case (kidneys attenuated, pale, with yellow fatty deposits in their cortices, serous cysts on their surfaces, and albuminous urine).

Buff-coloured, and cortices attenuated, in 4 cases (in 2, with albuminous urine).

Abnormal appearances in the kidneys, in all, in 23 cases, or in 31·5 per cent. of the whole.

*Second Series—44 cases, average age about 48 years.*

Extensive fatty degeneration in 6 cases (surfaces granular in 3).

Hyperæmia in 9 cases (with albuminous urine in 1).

Hypertrophy in 14 cases (in 2, confined to the right kidney; in 2, kidneys lobulated; in 2, cortices pale and attenuated; in 1, tubuli obliterated; in 3, extensive fatty degeneration; in 4, marked hyperæmia; in 3, substance softened; in 2, atrophy of the left kidney; in 2, albuminous urine).

General atrophy in 3 cases (both kidneys in 1, right kidney in 1, left kidney in 1).

Partial atrophy in 6 cases (tubuli wasted in 2, cortices in 4).

Partial fatty degeneration in 5 cases (tubuli wasted in 1, surfaces granular in 1, cortices attenuated in 1, albuminous urine in 2).

Abnormal appearances in the kidneys, in all, in 28 cases, or in 63·6 per cent. of the whole.

I am at a loss to understand how Dr. Dickinson could study these tables without coming to the conclusion that the abuse of alcohol is a powerful agent in inducing renal degeneration. Whether regard be had to the gravity of the changes recorded, or to the percentage of cases in which they were found, the evidence of these tables seems altogether unequivocal. In judging them, Dr. Dickinson seems to have been unconsciously biassed by his individual views of the types of renal disease, and to have overlooked the fact that clinically these types, speaking of chronic cases, are in large numbers, if not in the majority of cases, mixed together so as to produce a composite anatomical state. It must also be remembered that the alterations here recorded occurred in the bodies of persons who perished suddenly, while apparently in the enjoyment of their ordinary health; and that, consequently, they might be expected to be, for the most part, only in an early stage of development.

Dr. Dickinson next refers to the paper of Dr. Peters, of New York, who examined the bodies of nearly seventy persons who had died from the excessive use of ardent spirits. Dr. Peters thus describes the changes found in the kidneys: "The kidneys are generally somewhat enlarged, flabby, their cortical substances infiltrated in numerous small spots, with a whitish matter, either albuminous or fatty; occasionally they are granular." This description is too vague to found any argument upon; but it seems to indicate a not inconsiderable amount of disease. Dr. Dickinson remarks on the granular condition having been only found *occasionally*; but I find in the same paper that "granular liver was found in four or five cases only"; so that in that respect the kidneys and liver were not very differently situated.

In the last place, Dr. Dickinson appeals to the Reports of the Registrar-General, and finds an apparently

cogent argument on the want of correspondence between the death-rate from Bright's disease and the degree of intemperance prevailing in different localities. I have carefully gone over this point, taking the proportional number of deaths entered under the headings Delirium Tremens and Intemperance as a gauge of the inebriety or sobriety of the contrasted localities, and comparing large numbers, or a series of years, in order to get at tolerably trustworthy averages. My surprise was great to find that the conclusion of Dr. Dickinson was substantially correct, and that the death-rate from Bright's disease was as high in the more sober districts as in the more intemperate districts, and frequently much higher. But my surprise was still increased when I found that

the death-rate from diseases of the liver, and from those specially entered as hepatitis or cirrhosis, was no higher—often much lower—in the more drunken districts than in the more sober districts. Now there is nothing more certain in the whole range of etiology than that diseases of the liver, and especially cirrhosis, are produced by the abuse of ardent spirits; and yet the Registrar-General's Reports show no trace of this connection; indeed, if they show anything, they show that intemperance is actually a protection against diseases of the liver. This is a manifest *reductio ad absurdum* of this part of Dr. Dickinson's argument.

The following table summarises some of the results which justify the above observations.

*Comparison of the Proportional Number of Deaths from Intemperance, from Diseases of the Kidney, and from Diseases of the Liver, in different Districts.*

	Deaths from intemperance.	Deaths from renal disease.	Deaths from liver disease.
Town districts of Scotland, for the ten years 1855-64 .....	1 in 402	1 in 134	1 in 105
Mainland rural districts of Scotland, for the ten years 1855-64 .....	1 in 533	1 in 131	1 in 80
The five most intemperate registra- tion districts of England, for 1867 (Nos. 1, 2, 8, 9, 10) .....	1 in 512	1 in 92	1 in 86
The five most temperate registra- tion districts of England for 1867 (Nos. 3, 4, 5, 6, 7) .....	1 in 926	1 in 87	1 in 79

No further comment is necessary on this table. It shows conclusively that the Registrar-General's Reports cannot be safely relied on to determine the more delicate etiological problems.

I have now gone over *seriatim* the arguments advanced by Dr. Dickinson, and have, as I believe, succeeded in showing that they are inadequate to disturb the old opinion respecting the effect of alcohol on the kidneys; and that, in fact, the question remains just where it was before he wrote his arti-

cle. The only other point which he raises is regarding the proportionate number of granular kidneys in persons who have died of alcoholic cirrhosis of the liver. In forty cases of cirrhosis collected by himself, the kidneys were granular in eight. I may add that Frerichs found granular kidneys the same number of times in thirty-six cases of cirrhosis. In neither series is the proportion strikingly great, but it is certainly not inconsiderable. It must always be remembered that alco-

hol, like most other causes of disease, works along different lines in different persons, and that its effects vary according to the acuteness and chronicity of its poisonous action. How often does it not happen that we witness the production of cirrhosis from intemperance, without any of the nervous symptoms which usually characterise alcoholism; and, again, how often do we see the latter without the former?

Dr. Dickinson seems to have some difficulty in the *à priori* considerations regarding the way in which alcohol can reach the kidneys to do them injury. The kidneys are certainly less directly in the track of the absorbed alcohol than the liver and the lungs; but they are quite as much so as the brain and nervous system, which are the parts most surely and earliest affected by alcohol—always excepting the stomach.

The mode in which spirit-drinking affects the kidneys is probably twofold. In the first place, it is now well

known that alcohol, taken in excess, is largely eliminated in an unchanged state by the kidneys. In the habitual tippler, a frequently reiterated stimulation of the kidneys must arise from this source. Such a stimulation, going on for years and years, can scarcely fail at length in inducing a strong proclivity to organic disease. Secondly, the blood of the intemperate becomes, in process of time, more or less vitiated, and inadequate to minister to the healthy nutrition of the tissues, and, among others, of the renal tissues.

I do not wish to represent the action of alcohol on the kidneys in too strong relief: the nervous system and the liver are undoubtedly more constantly and earlier affected. But next to these come, probably, the kidneys; and, among the later perils of the less violently intemperate—the steady but not drunken soakers, if I may use the phrase—a high place must, I believe, be given to certain types of Bright's disease.



## THE DEMORALISING INFLUENCE OF DRINK IN THE ARMY.

By FRANCIS R. HOGG, M.D., *Royal Horse Artillery, Woolwich.*

“HAPPY FELLOWS! We clothe them, we feed them, and we allow them what they seldom exceed—a pint of sherry wine a day.”

Such are the observations made by the gay and envious crowd who stand on the front parade on a fine summer's evening, listening to the band and watching us at mess. Like the travelling shows, from the outside certainly the prospect looks tempting. Seated at two long tables, in a softly-lighted, handsome room, ornamented with lofty mirrors, are officers in uniform, feasting on every delicacy. Agricultural fathers would almost be frightened into epilepsy suddenly recognising Patrick Doolan and Abraham Bedun transformed from rollicking soldiers into sanctimonious waiters in white coats, red plush breeches, and

powdered hair;—the general effect of bright glass, polished silver, massive candelabra and the snowy tablecloth is pleasantly to dazzle the eyes of the hungry observers.

“Still we are not happy!” The gallant gourmand sees the invisible writing on the wall: “Red nose”—“chalk stones”—“gout”—“indigestion.” Shuddering at the thought of a Bath chair at Malvern, he sighs for the plain joint and the simpler home comforts when, after dinner, the feelings of a boa constrictor are not so fully understood as at mess. Oh no! intensely stupid work it is, a number of bachelors dining together without ladies, and, excepting on grand occasions, when the Emperor of China, the Viceroy of Liveranuggur, or the Lord Lieutenant of the Isle of Dogs conde-

scend to take pot-luck, the married officers stop away.

Human nature runs the same with the men for whom libraries, gymnasia, theatricals, penny readings, and magic lanterns have been provided by a grateful country. Ask the recruit, Does he not prefer smoking a churchwarden at the bow window of the "Brompton Hussar" or the gilded saloon at the "Goat in Crimson Overalls," where he can much more enjoy nigger break-downs, "After the Opera is over," and other popular songs with deafening choruses? Simply because a young lady is by his side.

Quoting from the Blue Book, it appears that the deaths from phthisis in the army in the United Kingdom range from two to four, the invaliding from five to eleven, per thousand; also that, of recruits who presented themselves, the number of those rejected for the same complaint ranges from four to eight per thousand. Why inflict on the reader the symptoms, alas! too well known to the merest tyro? We are always discovering new points of minute detail: the glorious spirit of scientific inquiry never rests; the talents of the physician, of the sanitary engineer, and the philanthropist, are always equally on the rack, devising new remedies, yet phthisis remains unconquered. Metaphorically, the midnight oil of studious theory but feebly illuminates the red lamp of varied practice. Hereditary predisposition, syphilitic taint, damp exposure, excesses, climate—specially the plains of India on immature, narrow-chested youths, or men prematurely old, constriction of body by drill or accoutrements inducing abnormal strain, functional derangement, and organic disease—all these causes are well known. The subject is a difficult one to discuss. Our army, which has made England illustrious in every period of history, differs from every other in the fact of having to face every variety of climate, good and bad. The soldier, especially when married, is a very costly article, obtained by competition with the labour market; consequently, instead of the robust and strong, very often the idle and weakly

volunteer to enter the ranks. The causes of heart disease, identically the same as those of phthisis, having been exhaustively considered by Corban and Myers, but little remains for others to enlarge upon; still the ghastly subject of suicide has been scarcely alluded to. Printed records and statistics unfortunately show that men, especially dissipated old bachelors, through the depression of drink and *ennui*, have destroyed themselves for the most frivolous reasons, either by hanging, drowning, or shooting; by taking poisons, such as opium and prussic acid; and by cyanide of potassium, purchased ostensibly to clean gold lace with; or else throwing themselves in front of railway trains. Writing from memory, a man committed suicide on being sent to regimental duty, instead of remaining as servant and gardener. Napoleon exposed the naked bodies of such moral cowards; and the fable is told of a colonel of a West India regiment, who, finding men objecting to drill cut their throats, checked the practice by registering on parade a vow that in the very next instance he would cut his own, and, naturally, finding his way to the infernal regions, there drill those who had gone before with tenfold severity. Hospitals—prisons—martial law—invaliding—what a sum of money these items absorb, considerably influenced by drink! Commanding officers, chaplains, medical men, will confirm this, and without any other reason but that of experience. My individual opinion is, that, whenever possible, the voice, pen, and practice of our profession should be antagonistic to stimulants. Stamping out drink in the army will obliterate syphilis. Stamping out drink will check blasphemous language and every pernicious habit tending to degrade and corrupt brave and honest lads. England is a rich country: are not the great capitalists, the millionnaires, concerned in the question of protecting personal wealth, if not their native land and her colonies? The humble suggestion is, that well-conducted soldiers after a few years' service should have the first

claim, not merely for Government appointments, but also for situations in banks, factories, shops, and every branch of civil employ.

With this prospect, also workshops in barracks, soldiers' gardens, separate dining and sleeping rooms, and the attempt to make a barrack somewhat to resemble the comfortable home of the mechanic, a better and a healthier class of men would be ob-

tained without additional expense.

The impending change in our military system promises that the army of the future will more than maintain the achievements of the past.

As at Waterloo, in the Crimea, and in India, led by respected officers, the British soldiers' cheering response will ever continue—"Go on, I will follow thee to the last gasp with truth and loyalty."



## "LE DEMON ALCOHOL."

"THE Demon Alcohol—its disastrous effects on the Mind, the Intellect, and the Body, and the means of remedying them," is a pamphlet by Prosper Despiné, of Marseilles, Doctor of Medicine, who is, besides, the author of a very able and comprehensive work in three volumes (pp. 1,800) on Crime, Lunacy, Prisons, Intemperance, &c., entitled "Psychologie Naturelle," and who is also a Corresponding Member of the Howard Association, by whom the pamphlet has been forwarded to us.

The Doctor commences by describing the first effects of alcoholic drinks as being pleasing, producing gaiety, comfort, a feeling of power and strength, a certain fertility of imagination, &c., and as so seductive in their influence that persons do not suspect, until perhaps too late to avoid it, the danger in which they have become involved. He then gives two medical extracts showing the complaints to which the use of the "detestable poison" has given rise. One extract is from a work by Dr. Legrand du Saulle indicating the pernicious results of the use of absinthe, and the other is from an Essay by Dr. Jolly, in the *Gazette Medicale de Paris*, on the use of alcohol and tobacco—the abuse of the former being more particularly dealt with.

A chapter is devoted to the consideration of "The Action of Alcoholic Drinks on the Faculties of the Mind," and the remarks made thereon are of

a pertinent and very instructive character—the subject being also illustrated with numerous cases which have come under the Doctor's observation, exemplifying the various and lamentable results of intoxicating liquors on the minds of persons who have indulged in their use.

In another very interesting chapter "The Action of Alcoholic Drinks on the Body" is considered. Some forcible facts are adduced showing the baleful effects of a continued use of alcohol in its several shapes, and, among other instances cited in support of his theory, that prolonged and severe labour can be endured equally well, if not better, without the use of stimulants of any description. Dr. Despiné quotes the Oxford and Cambridge Boat Race as a fair example of the thoroughly arduous and difficult work which can be accomplished without the slightest aid from alcohol.

Dr. Despiné then indicates "The proper means of effectually combating the Demon Alcohol," and is of opinion that two kinds of methods should be adopted to stop the ravages caused by it—the first relating to the sale of the drink, and the second to the treatment of persons who shall misuse them notwithstanding the hindrances placed on their sale. With reference to the sale he suggests that, although the poisonous effects of alcohol are not in general immediate, they are not less certain and disastrous, and that it should therefore be treated in the

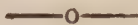
same manner as all other poisons, and its sale in retail be prohibited. He advises that all wine-shops and public-houses be shut up, and that in the *cafés* the sale of intoxicants should no longer be allowed. These are a few of the preventives which he would adopt, but our space will not permit us to enumerate them all in detail.

The means to be tried on those persons who abuse alcoholic drinks are next considered, but as they are somewhat voluminous we beg to refer those interested in the subject to the pamphlet itself. We may, however, state that one of the means proposed is that all toppers should be officially informed that if they continue to annoy their families and society they

would be incarcerated in an asylum specially intended for drunkards, and if, notwithstanding this warning, dipsomania manifested itself, they would then be confined until their craving and inordinate passion for drink had been effectually cured.

In closing his pamphlet Dr. Despiné says, "In publishing this article I fulfil a duty of conscience and an act of conviction. I appeal to all righthearted men to sustain the principles and to make them prevail."

The little work, not being intended exclusively for the medical profession, is written in an interesting and pleasing style, and all who are concerned in the progress of the temperance cause would do well to give it a careful perusal.



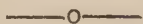
## ELIMINATION OF ALCOHOL FROM THE BODY.

NOTWITHSTANDING the careful researches of Parkes, Duprè, Anstie, and Thudicum on this subject, it does not appear to be quite exhausted. Dr. Subbotin gives the details of a considerable series of experiments he has recently performed on rabbits in the *Zeitschrift für Biologie* (Band vii. Heft 4). The mode of detection of the alcohol he employed was its acetification by chromic acid, or rather by bichromate of potash and sulphuric acid, the quantity being determined by the subsequent estimation of the distilled acetic acid by means of soda solution. The respiration experiments were conducted in an apparatus lent to him by Voit, and constructed on the plan of the large apparatus of Pettenkofer and Voit. Alcohol of the strength of 29 per cent. was injected into the stomach through the exposed œsophagus, and this tube at once ligatured. The results at which he arrived were: That, during the first five hours after the introduction of alcohol into the stomach, a considerable amount escapes by the skin, lungs, and kidneys; that at least twice as much escapes by the lungs and skin as by the kidneys; that the amounts he obtained, showing that from 6.79

to 7.4 per cent. were thus eliminated, were, from various considerations, certainly below the quantities really discharged from the system. These conclusions he arrived at in 1870. Quite recently, however, he instituted another series of experiments, the object of which was mainly to determine for how long a time after ingestion alcohol continued to be excreted by the skin and lungs. In one of these experiments he found that 12.6 per cent. of the alcohol was eliminated in eleven hours and a half through all these channels; in another instance 16 per cent. was eliminated in twenty-four hours, either in the unaltered condition or only changed into aldehyde. Subbotin maintains that alcohol cannot be regarded as in any sense a food, since under its influence the metamorphosis of tissue diminishes, the temperature falls, the amount of carbonic acid excreted lessens, and a smaller quantity of urea is discharged. Its action, he thinks, is direct upon the nervous system, effecting a change in the processes of nutrition, and it may also act directly on the blood-corpuscles. He maintains that there is a distinction (too subtle for translation into English)

between Nahrungsstoffe, Nahrungsmittel, and Nahrung. "Alcohol," he continues, "which is neither a Nahrungsstoffe nor a Nahrungsmittel, in the ordinary sense of these words, yet plays an important part in the economy of the body, since it is a typical representative of that group of substances characterised by the general name of excitants (Reiz- or Geniessmittel)." Professor Voit adds a note to the paper, in which he does not appear to agree with Subbotin's views of the

rôle of alcohol in the system, or quite to understand his distinctions. He calls albumen, fat, water, and salts, Nahrungsstoffe, because they form constituents of the body; but he also includes starch under this term because it can, by its oxidation, preserve the tissues. He does not define or refer to the term Nahrungsmittel, but he agrees with Subbotin in regarding alcohol as a Reiz- or Geniessmittel (excitant).—*Lancet*, June 8.



## DR. DUPRE'S EXPERIMENTS ON ALCOHOL.

(To the Editor of *The Lancet*.)

SIR,—For the honour of our profession, of which it has too often, and at times not untruly, I fear, been said that we foster intemperance by a somewhat too careless prescription of alcohol on a not altogether scientific basis, I wish to protest against a very illogical deduction drawn by Dr. Dupré from his late experiments on the action of alcohol; and as it would seem to be the clear duty of all physiologists who do not wish to see false conclusions on a subject of such importance used as a sword in the hands of the intemperate, to speak out at such a time, I wish also to elicit, if possible, the opinions of such of my more experienced brethren as have given thought to the matter upon the point I have challenged below as inconclusive.

What is there in these new experiments that in the slightest degree weakens the physiological evidence in favour of temperance in the matter of alcohol? To consider the main point raised by Dr. Dupré: "The amount of alcohol eliminated per day does not increase with the continuance of the alcohol: *therefore* it must be, somehow, destroyed in the system." If this statement be ultimately confirmed, then Lallemand will be proved to have erred as to fact in his French experiments; but the arguments for

abstinence will just be as good as they are now or were before 1860 in their relation to science: that alcohol, by its decomposition in the system, diverts oxygen from its function and retards exhalation of carbonic acid, robbing the blood of its purifier, and leaving a more valuable fuel than itself unburnt, in fact, and *therefore* the circulation less warm, which is what the thermometrical evidence points to. But is Dr. Dupré's conclusion a logical one: If the alcohol eliminated per day does not increase, is it *necessarily* decomposed? I am not denying that some decomposition *may* take place; but neither the decrease nor the increase in the elimination, coincident with the continuance of the alcohol, seems of itself to be any proof of its decomposition. Is it not one of the peculiarities of alcohol to tarry an almost indefinite time in the system, storing itself, unburnt, in the brain and liver especially, and there accumulating, to remain, causing more and more retention of effete matter, as it produces a greater effect on the nervous system, arresting some waste possibly as all paralyzers may be said to arrest it, its own accumulative action serving to lessen its own elimination as well as the excretion of effete matter? The action it undoubtedly has in staying exhalation

and excretion of chlorides and urea should also extend to the elimination of itself by degrees; the system throwing off a small dose, not strong enough to render the nerves governing the eliminatory functions powerless, in great part, but only a small proportion of the larger dose by reason of the paralysing effect produced. The wonder to me would be if increase of elimination resulted from continuance of the drug.

As to the infinitesimal quantity of some undetermined "iodoform" compound which Dr. Dupré alleges is eliminated by the kidneys in health

and by teetotalers even, and which has a similar reaction to tests as alcohol itself, the fact of such a substance being cast out, though formed in so minute a quantity, furnishes an argument against the use of alcohol; for why give the body additional work by taking that which nature at once gets rid of when it happens to be formed in the system amongst a multitude of other natural decompositions of vegetable organisms?

Yours truly,

F. ARNOLD LEES,

L.R.C.P. Lond., &c.

Hartlepool, June 17th, 1872.

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## Notes and Extracts.

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ONE THOUSAND AMERICAN DOCTORS.—The twenty-third annual meeting of the American Medical Association was convened at Philadelphia on the 7th of May, and continued in session four days. The number of members in attendance was upwards of one thousand. A resolution was unanimously agreed to recommending physicians to discourage the use of alcoholic stimuli in their practice.—*Lancet*.

ALCOHOLIC TREATMENT OF DISEASE.—At a recent meeting of the West Derby Board of Guardians, Mr. Tickle quoted statistics with a view of showing that, since the adoption of the new system of restricting the supply of alcohol in the workhouse hospitals, the expenditure for that item had been diminished at the rate of £1,400 per annum. He also asserted that there had been a diminution of the death-rate as a consequence of the altered system.—*British Medical Journal*.

THE ALLOWANCE OF BEER TO AGED PAUPERS.—At the weekly meeting of the Leeds Board of Guardians, held

on Wednesday, 19th June, Mr. Middleton, chairman of the Board, presiding, the Clerk (Mr. W. Lampen) read the following letter he had received:—"Local Government Board, Whitehall, June 14th, 1872.—Sir, I am directed by the Local Government Board to acknowledge the receipt of your letter of the 22nd ult., in which, by direction of the Guardians of the Leeds Union, you request the Board to reconsider the dietary table for the Workhouse issued by them on the 9th December, 1871, with the view to an allowance of beer being given, as formerly, to the inmates above fifty years of age. I am directed to state that as the medical officer has power to order beer in any case in which he considers it necessary, and as the Board understands that the dietary as now in force has proved amply sufficient for the well-being of the inmates, they see no reason why the ordinary practices as regards the use of stimulants in workhouses should be departed from in the present instance. The Board accordingly regret that they are under the necessity of refusing their sanction to the Guardians' proposal.—I am, Sir, your obedient servant, H. FLEMING."

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THE  
MEDICAL TEMPERANCE JOURNAL.

October, 1872.

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Original Contributions.

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THE EVIDENCE TAKEN BY THE  
SELECT COMMITTEE ON HABITUAL DRUNKARDS.

At the date of our last issue, the operations of this Committee had so far transpired as to enable us to present our readers with a summary of their report and appended recommendations. The body of evidence had not then reached us. We are now in possession of the entire result in regular blue-book embodiment; but we regret to find ourselves left to make what incursions into it we best may without the aid of that needful accompaniment—a clear and copious index. A well-constructed index, arraying under fit headings the salient points of the question, and referring under each to the numbered items of evidence, would have been more serviceable to the reader than even a formal digest, and proved a useful repertory of facts and testimonies of handy access to the social reformer. The body of evidence of course composes the bulk of the book, and is preceded by the report, and by a record of the Committee's proceedings, and is followed by an appendix of interesting tables and documents.

From these prefatory records it appears that two drafts of a report had been submitted to the Committee, one by the Chairman—Mr. Dalrymple—and the other by Mr. Akroyd. The former was adopted, with some emendations and additions—these last consisting chiefly of a well-merited tribute to the Chairman for the valuable aid he contributed, especially by his well-devised and well-timed visit to America. Mr. Akroyd's document also finds place among the *res gestæ* of the Committee, and is well worthy of its space for its facts and deductions, especially relating to America; but it betrays a preoccupation against

prohibitory laws, and gives that topic a place out of all proportion, if not wholly uncalled for, in a report on the specific subject of sanatoria. The report actually adopted, as drafted by the Chairman, observes a discreet reticence on that vexed and perplexed theme, and presents a more comprehensive view, though in briefer space, of the prominent features of the sanatorial question.

Of the report itself, after the summary previously given, it will not be needful to say much. It sets forth the inadequacy of existing legislation, the evils of drunkenness, its increase, the uselessness of petty fines and imprisonments, the need for legal control over the drunkard, the success of the American experiments, the distinction between insanity and the drink-mania, the consequent unfitness for the drunkard of the ordinary hospital or the lunatic asylum, the need for increased fines, and for a drunkards' register, and for sureties, and for power to confine offenders to inebriate reformatories; and the encouraging fact that from 33 to 40 per cent. of those admitted into such institutions have been cured, the time for these cures averaging from twelve to sixteen weeks in America, and somewhat more in England. The recommendations, after defining sanatoria, propose to divide them into two classes—the first for those who can, and the second for those who cannot, pay for their accommodation; admission to be either voluntary or compulsory, but not to leave except under prescribed conditions; compulsory cases to be duly authorised and regulated; the reformatories to be regularly inspected; industrial accompaniments to be instituted of which the proceeds should go to help the funds; fines for drunkenness to be increased, with the alternative of imprisonment; a drunkards' register to be kept, and ample records of cases; with connected provisions in detail.

The Committee commenced its sittings in March last, the first witness examined being Mr. William Smith, Governor, for the past eleven years, of Ripon Prison. He distinguished between the habitually intemperate and the strictly criminal class, and mentioned in illustration the case of a woman who, in a space of twenty-five years, from 1847 to 1872, had been committed fifty-eight times for periods of from three days to three months, making an aggregate of time spent in prison of five years nine months and twenty days, and all for no other crime than being drunk and disorderly. This woman, Mary Thompson, *alias* Fox, *alias* Conolly, &c. (for she takes a new name for every new gaol), has never once been found guilty of felony, and yet was in gaol at that very time. He described the drunkard as weak in body, and generally below the average in mind, and pronounced short terms of imprisonment a total failure. He gave some touching illustrations of hereditary tendency; for example, Martha Nixon, with

half-a-dozen *aliases*, thirty-three times in gaols, and now fulfilling a term of seven years' penal servitude, who had drunken parents, and was literally driven from home. Another case was that of a son who refused, when in gaol, to see his father, on the ground that that father had been his ruin, turning him out to sell matches while he himself sat drinking in publichouses. He gave an appalling account of the female drunkards; and stated that the woman Thompson above named had repeated trials in a house of her own, but broke loose finally from all such kindly help. He expressed himself in favour of inebriate asylums.

The next witness, Mr. Webster, another prison Governor, at Kingston-upon-Hull, after similar testimony about drunkards, declared strongly against gaols for them, and recommended other buildings, with small sleeping cells, and a large working room, where thirty or forty could be kept at their several industries under supervision, allowing them a share in the proceeds, and keeping them for, say, nine months—short terms being utterly useless. On this and other points he gave important suggestions in detail. He stated that drunkards grow in weight under prolonged terms of imprisonment. He testified that the Saturday half-holiday and the good times had materially increased intemperance, and recommended greater stringency with publichouses. In many points of detail Mr. Webster's evidence was valuable and suggestive, but our space forbids us to enlarge.

At this point medical witnesses came in to relieve the complexion of the evidence. Dr. Boyd gave the result of his extended experience on the connection between intemperance and insanity, and, though not over sanguine of results, he urged that, with habitual inebriates, no term of detention less than three months, with, perhaps, other three to test the case, would be of the least avail.

Mr. White, a practitioner of forty years' standing, and one of the Coroners for Dublin, stated that during ten years he had over a thousand inquests, of which forty were suicides. A large proportion of these cases he traced either directly or indirectly to drink, including, under this latitude, at least two-thirds of the suicides. He testified strongly and repeatedly to the increase of intemperance in Dublin, among the better classes in particular. They first tampered with sherry, and then went on to a free use of spirits. This he attributed in part to the increase of attractive restaurants, which they entered freely any hour of the day, instead of the old taverns, which they were more afraid of being seen to enter. On the chances of restoring an inebriate, he also, from the want of data, expressed himself with caution.

Dr. James Crichton Browne, of the West Riding Asylum, gave some very interesting results of investigations instituted a few

years ago at the request of Archdeacon Sandford, for the well-known Canterbury report. Of 500 cases of lunacy, he found seventy-five, or 15 per cent. "directly due to drunkenness," emphasising the word "directly," to leave room for a great many more indirectly attributable to that cause. Of these the hereditary cases are not few. He quite agreed with Dr. Howe, of Massachusetts, who found that of 300 idiots 145 had drunken parents. More recently, in January last, Dr. Browne found that of 404 cases of lunacy fifty-eight were directly due to intemperance, being 14 per cent., or about the same as before, leaving an unknown margin for the indirect cases. He entered into an elaborate analysis of the phenomena and varieties of drunkenness, defining habitual drunkenness as a vice, and dipsomania as a disease—the first voluntary, the latter beyond self-control; the first, as a rule, urging some external excuse, such as the recurrence of a birthday, or meeting a friend; the latter impelled by an inward and irresistible craving, which often comes on periodically. On the remedy he said: "My opinion is that all the remedial measures which have up to this time been attempted in this country are perfectly futile, and that as yet we have no means of dealing with habitual drunkards." He referred to the practice, prior to the Scotch Lunacy Act of 1857, of sending habitual drunkards to Scotch asylums on the mere statement that the person was of unsound mind, but this has been checked. He gave an appalling case of a gentleman of some position, who was sent by the long-tried relatives to board at an hotel where he might drink himself to death, which he shortly after did. He has known drunkards sent to Scotland all the way from Canada, to get under the provisions of the Scotch Lunacy Act. "One curious fact," he says, "has attracted my attention, and that is, the great prevalence of epilepsy among the insane of England. I have about 200 epileptics under my care, and in the Scotch asylums the proportion is comparatively small. Epilepsy and general paralysis are, I should think, about four times as frequent in England as in Scotland." He adventures a theory in explanation of this, grounded on the different beverages of the two countries, but as he does it diffidently, and, as we think, incorrectly, we need not here reproduce it. He strongly recommends the institution of inebriate asylums.

Dr. Anstie, of London, after making some qualifying allusion to some of Dr. Browne's distinctions on dipsomania, gave it strongly as his opinion that "nothing except entire exclusion for a long period, and under the most absolute and despotic restraint, would have the least chance of doing any good whatever." The question whether habitual inebriates, after lengthened treatment, could be cured in as fair proportion as other cases of disease, he

pronounced "adventurous," in the absence of proper data, but was disposed to augur very favourably, especially if absolute restraint was early applied. He spoke despairingly of paroxysmal oinomania, condemned short imprisonments as useless, and recommended sanatoria for prolonged periods under despotic control. He considered intemperance on the increase among "the suddenly rich middle classes," attributing much of it to "the empty-mindedness of the *nouveaux riches*," and to increased extravagance among all classes. That medical treatment has anything to do with it he declared to be "a monstrous statement," and that he had found alleged cases of this kind "turn out to be a scandalous misrepresentation"; though he would not say but that such cases might now and then occur. To the question whether hereditary predisposition might not be affirmed of those whose parents, though not drunkards, lived high, he replied that, though data were scarce, "he had no doubt that many persons who were never drunk, parents in the old port wine drinking period, have transmitted very unstable nervous systems to their children." Dr. Anstie made frequent approbatory reference to Dr. Crichton Browne's testimony, which was given in his presence. Two things he affirmed towards the close of his evidence in which "he desired to be understood," and we shall do our part to the attainment of this end. One of these is to our regret, the other we cordially approve. The regrettable "opinion" which he expresses, "based on the most recent physiological researches, is that alcohol, in moderate quantities, is *an exceedingly useful article of daily food*, at any rate for large classes of the community." We exceedingly marvel where, and of what nature, these "most recent physiological researches" may be! To us they can only mean incursions into physiology, with a high faculty of seeing things in any way other than as they really are. But let us part good friends with Dr. Anstie by doing our best towards letting him "be understood" in the other and better sentiment to which he gives expression. Here it is bodily, as it stands in the evidence:—

"There is one thing which I should like to put on record very particularly, namely, that there need be no fears of the result upon the health of intemperate individuals of immediately depriving them of every kind of alcoholic stimulant; it would be a question which would be complicated by letting them down by degrees; the only way of letting such a man down is by cutting him off from drink altogether, and it is perfectly and absolutely safe, and the only thing which is calculated to do good.

"585. *Mr. Read.*]—You would put a man who had drank two bottles of wine a day upon cold water instantler?—Yes, I have done it frequently, and never saw the slightest ill effects.

"586. Would you give him a tonic, or something of that sort?—I will not say about that; it would be according to other indications. I certainly should not give him any alcohol."

Dr. David Skae, physician for the last twenty-five years to the Royal Edinburgh Asylum, in classifying drunkards, mentioned in the first, or regular, variety, as needing no asylum, a gentleman who "was carried to bed drunk every night for fifty years, and yet he made a large fortune, and was in the market every morning attending to his business." He must have been a well-seasoned sot, and a hard-headed Scot. Passing the second class, the tipplers, we came next to the dipsomaniacs, who are ably and graphically described. These lose all control, and will drink anything stimulating, if denied spirits, even hair-wash. Their cravings are mostly hereditary, or flow from disease, or blows on the head. These ought to be restrained, as cases of veritable disease. Then come delirium tremens, and cases of hallucination of a permanent caste, all fit subjects for restraint, which ought to be prolonged. "I have known a lady," he said, "drink shoe-blackening and turpentine." They are also, for the time, great liars and great haters, and as such are dangerous. A very kind and amiable gentleman, then under Dr. Skae's care, when ill, "hates his wife, and hates his own life." The proportion of insanity due to drink he found to be 16 per cent. males, 7 per cent. females, being an average of 11½ per cent. Dr. Skae's evidence was in various respects remarkably interesting and suggestive.

We must of necessity skip large portions of valuable evidence that follow in order to leave room for the interesting information contributed by America. Let the strangers have precedence, is eminently applicable here. Among the number thus passed over is Dr. Bree, of Colchester, who, among other noteworthy suggestions, would impose greater responsibility upon the publicans, who know perfectly their dipsomaniac customers.

Dr. Alexander Peddie, an Edinburgh physician of thirty-seven years' standing, and a high authority on this very question, having written many years ago in promotion of inebriate asylums, and read papers on the subject at the Social Science Association, gives lengthened and very valuable evidence before this Select Committee. He first wrote on Delirium tremens in 1854, and then on Dipsomania in 1858, and besides other writings, including a paper before the Social Science gathering of 1860, he contributed articles in "Chambers' Encyclopædia Supplements" in 1868. Being told he might read his statements, where he preferred doing so, he proceeded to give from jottings a large amount of physiological evidence in regard to alcohol and its effects, as pertaining to the subject of inquiry, which it would be simply impossible for us to summarise, but which, we need scarcely add, is of a sound and thoroughgoing type. He mentions a case similar to that of Mary Thompson above named, the case of the

wife of a master painter who has been forty-two years an habitual drunkard, who has been boarded in the country, thrice confined in a lunatic asylum, fifteen times in houses of refuge, fifteen times convicted of being drunk and disorderly, and sentenced to terms of imprisonment amounting in all to 778 days, besides 200 nights spent in police cells. He considers this case "a strongly marked family history of drunkenness on both sides." He adduced other and very appalling cases as demonstrating hereditary predisposition. On the peculiarities of dipsomania he quotes authorities, medical and legal, and gives some cases of maniac theft only in one article. Sheriffs Bell, of Glasgow, and Barclay, of Perth, give some curious facts of this kind. One woman in this state constantly entertained herself at smashing windows; she drowned herself when drunk in 1865. A man, when drunk, stole nothing but Bibles, and was transported for the seventh act of Bible stealing. Another man stole spades; a woman shawls only; another woman shoes only; and a man, of a peculiar taste, and of the name of Grubb, was transported for the seventh act of stealing—a tub. For these and other intensely interesting facts and cases, we must refer our readers to the evidence itself.

Among the evidence we should gladly have quoted with some fulness are the important statements by Dr. Arthur Mitchell and Dr. Forbes Winslow, especially relating to the perplexities and difficulties arising out of the present defective legislation. Dr. Mitchell is one of the Commissioners in Lunacy for Scotland. Of the cases reported to the Scottish Board last year in which the cause of insanity was stated, 19 per cent., he said, were attributed to intemperance. On the drink mania, in its causes, varieties, and consequences, he and Dr. Winslow gave interesting evidence to the same effect as other professional witnesses had already done. Dr. Mitchell dwelt especially on the legal difficulty of dealing with such cases. The dipsomaniac may be put in an asylum, "but as soon as the intellectual disturbance subsides, he can demand and obtain his discharge as a sane man, because he is no longer in a condition which could make it possible to obtain statutory certificates of insanity, on which he could be committed to the asylum." The liberated man of course returns, in most cases, merely to repeat his rounds of folly. On being asked what he would recommend, Dr. Mitchell replied that the object desired "could only be attained in separate and special institutions," of two kinds, "for paying and non-paying patients," and all licensed. "The institutions for paying patients should be left to private enterprise," and might be of various grades and scales. For non-paying patients he "thinks parishes, or combinations of parishes, should be empowered to assess for the building of such

institutions, or to use any existing building set apart for that purpose"; and that counties might act and combine in a similar way. He would be "glad to see one building in some central part of Scotland as a beginning erected by the Government." "Through this we should acquire the experience we need." On this being reverted to towards the close of his examination, he said "he would only have one small one as an experiment in Scotland at first, the cost to be paid either out of the Consolidated Fund or by a general rate"; and on being asked if he would apply the same remark to England, he replied that he named Scotland simply "as knowing most about it," and added that, with the single exception of such a place to begin with in either country, he would leave all to voluntary enterprise.

Dr. Winslow followed to the same effect, and furnished not only valuable principles, but striking illustrations from a thirty years' "acquaintance with insanity and intemperance amongst the upper and upper-middle classes more especially." In these strata of society, he said, it was not so easy to trace insanity to intemperance, though many such cases occurred. At the request of the Chairman, he gave his opinions at great length, and to the effect others had already expressed, on the confusion and perplexity caused by the present defective legislation, and urged sanatoria as a "national blessing." He bore emphatic and refreshing testimony to the true character of alcohol, and the nation's duty in consequence. He said: "I look on alcohol as a poison. Every means should be had recourse to to limit or restrict the sale of a poison, as you interfere with the indiscriminate sale of opium, prussic acid, or arsenic. Alcohol is not a necessary of life; it should be dealt with by the Legislature as a poison." These positions he amply illustrated. He referred to the difficulty of knowing when drunkenness was really cured, because in most cases there was "associated with it a disordered state of the brain which you do not cure"; urging this, of course, as a reason for prolonged detention. "There is no class of affections," he said, "which, viewing them as mental affections, are so liable to relapse as drunkenness; you apparently extinguish other forms of mental disease, but, with regard to this unhappy propensity, you never feel safe that the habit is crushed." Dr. Winslow's evidence throughout has the clearest ring in it on the nature of alcohol, and on public responsibility connected therewith. On these vitally important points his trumpet gives forth no uncertain sound. Along with much else to the same effect, he says: "I believe that, in habitual drunkards, the whole nervous structure, and the brain especially, become poisoned by alcohol; all the mental symptoms which you see accompanying ordinary intoxication result from the poisonous effect of alcohol upon the

brain; it is the brain which is mainly affected. When a person takes stimulants to excess and becomes inebriated, it is in consequence of the brain being poisoned."

Passing reluctantly over some important evidence, including that of Mr. Davis, stipendiary magistrate of Sheffield, Dr. Macgill, police surgeon of Glasgow, and Major Greig, head constable of Liverpool, who gave some valuable statistics, we shall devote our remaining space to Transatlantic testimony and experience.

The American part of the evidence is of singular interest and value. Directly or indirectly, we owe it all to the zeal and wisdom of the Chairman. After his faithful parliamentary action in the session of 1871, first withdrawing his bill on the Government encouragement held out to him, and afterwards moving for and obtaining the Select Committee on Habitual Drunkards, Mr. Dalrymple devoted his recess to a personal tour of inspection in the United States, where he spent the months of September and October, thoroughly acquainting himself with the results of the sanatarial institutions there, and volunteering his evidence to the Committee. He visited eight inebriate asylums in the United States, the only one left unvisited being that of San Francisco, which lay beyond his beat; and, by way of compensation, he visited one in Canada. These are all regulated by charter, or by some act of incorporation, and are under the control of committees. All except two are in receipt of State-aid, though originated and in part maintained by individual philanthropy.

Mr. Dalrymple's visit happily fell on a time when special attention was being directed to the subject in America. A recently formed "Association for the Cure of Inebriates," comprising the medical heads of most of the existing asylums, was about to hold its second annual meeting in New York, in the month of November. He had hoped to be present at that meeting, but, being unable, he had addressed to the Association three questions, viz. (1) whether it was desirable to give legal power to detain patients longer than they themselves might choose—which they answered in the affirmative; (2) whether those who enter voluntarily, or by persuasion, should be put in the same place as those sent there by legal authority or committal—also answered in the affirmative; and (3) whether inebriates should ever be put into a lunatic asylum or ordinary hospital, or, if admitted when in a maniacal state, should be kept after the fit had passed—to which they replied that they should not, or, if temporarily admitted in a state of mania, that they should, directly on its subsidence, be transferred to an inebriate asylum. In the closing part of his letter, Mr. Dalrymple made the earnest request that two of the best informed of those conversant with sanatoria should be deputed to visit England, and give their evidence before the Select

Committee; a felicitous suggestion, which met with a prompt and cordial response. Dr. Joseph Parrish and Dr. D. G. Dodge, the chairman and secretary respectively of the "Association for the Cure of Inebriates": the former being the President of the Pennsylvania Sanatorium, Media, near Pennsylvania; the latter, of the New York State Asylum. The fulness and lucidity of the testimonies given by these gentlemen must strike every reader, and constitute a precious vein in this body of evidence. Of Dr. Parrish, Mr. Dalrymple says: "I visited the establishment of Media twice, though I only once saw the superintendent, Dr. Parrish, whom, from length of experience, accurate knowledge, moderation of views, and sobriety of judgment, I place at the head of all those with whom I have had communication."

The American part of the evidence forms the closing portion of the Blue-book, occupying, in addition to the Chairman's own evidence, the greater part of three sederunts. Dr. Dalrymple himself leads off, and states at the commencement of his evidence the following as the aggregate result of the information he was enabled to give of the nine asylums he visited. He says:—

"The grand total of admissions since their opening was 5,959; of whom 1,305, or nearly 23 per cent. were readmitted once; 227, or nearly 4 per cent. were readmitted twice; and 97, or nearly 2 per cent. were readmitted thrice. Of such admissions, 5,515, or about 94 per cent. were voluntary; 144, or between 2 and 3 per cent. were admitted by the intervention of friends; and 214, or nearly 4 per cent. were committed by justices: the results being that of the 5,959 who have been or were so under treatment, 2,018, or nearly 4 per cent. were cured and discharged; 318, or over 5 per cent. received benefit; 11, or considerably less than a quarter per cent. died; 3 became insane, and 378, or between 6 and 7 per cent. were returned as incurable. The average number of years that those institutions have been in operation is five years and twenty-six days, the longest period being that of the Washington House at Boston, which has been at work fourteen years; and the shortest period that of Baltimore Asylum in Maryland, having been at work only four months."

Mr. Dalrymple embraced opportunities of conversing with many of the patients, and was much struck with the frank and intelligent way in which they conversed on their position and prospects. The impression thus produced greatly deepened his sense of the cruelty and injustice of consigning this class of patients to an ordinary lunatic asylum, and of throwing them in contact with the insane. From Dr. Parrish and his books he ascertained that he never returns a patient lightly as cured, but follows him vigilantly after leaving to make sure. Hence his statistics of cure are less sensational than others, but of course more reliable. Many of the patients have been sots for years; a good many become insane; some die of paralysis; while the irresistible craving for drink he regards as evidence of brain disease coming on; but he has great faith in the maxim "*principiis obsta*," if

timely and faithfully applied. The class of patients at Philadelphia, all male, are described as superior; contrasting favourably with the hardened sots, opium-eaters, and debauchees, especially of the South, where, accordingly, the medical superintendents express themselves as less sanguine in regard to results. One of these, Dr. Gamble, utterly distrusts a drinker's promises to stop, until he has been long tested, and pronounces short residences useless except to cure the immediate effects of a debauch. Dr. Donaldson, a professor, strongly expressed the opinion that only the power of detention, prolonged sufficiently to repair the injured tissues, will prove of any avail. It may be six months, it may be more; but if twelve do not suffice, the case is regarded as rather hopeless. Dr. Stuart said he was unable, during forty years, to recall more than forty reformatations by moral as distinguished from physical means; and even of these, properly speaking, not more than half; the other half being cured, as he believes, by the *vis medicatrix naturæ* working round the system till drink became distasteful.

These American institutions differ considerably in the class of patients that find their way into them, and sometimes in the modes of treatment and in the periods of detention. The statistics of cure, of course, vary in proportion. Dr. Dodge, one of the deputies, of whom Mr. Dalrymple also speaks in high terms as a skilful and energetic superintendent, is able to report more than 50 per cent. as cured. He, in common with others, uses liquor medicinally, of course not dietetically; and drops it as soon as possible, deeming the drink-craving a disease, and "total abstinence as the only preservative against relapse." The Washingtonian Home at Boston, which brings moral influence a good deal into play, presents the interesting feature of having for its superintendent Mr. Lawrence, who has filled that position for five years, and "who was himself for many years a confirmed drunkard," and is thus a living illustration of what can be effected by such institutions. Here is an interesting and spirit-stirring picture:—

"I visited the institution again on one evening, and met between sixty and seventy people, most of whom either were or had been inmates; some had their wives and children with them. After a short religious service there were several statements made of personal experience. One man stated that for twenty years he had never been sober more than five months together, that after being a patient in the Home he had by treatment been able to give up drink, and had not touched it for four years. Another, who is now an assistant in the Home, stated that he had ruined himself and family by drink, had given it up and recovered his position only to destroy it again and again, but that now for more than five years, after a long residence in an inebriate asylum, he had given it up entirely. Many other statements, more or less highly coloured, were made; but the burden of them was that cures, after

long use of alcohol and frequent relapses, were rare; that cures are in proportion to the earliness of the treatment and its sufficient duration, backed by a resolution to resist temptation rarely found in old topers."

Mr. Dalrymple rehearsed, or handed in, various American statutes, empowering relatives or others to take regular steps for getting drunkards judicially consigned to inebriate asylums. To attempt any summary of these, in their local diversities, would carry us beyond our limits. It is only, however, in comparatively rare cases, that such steps are resorted to; by far the largest proportion of admissions, amounting to 94 per cent., being voluntary, some 2 per cent. being through the agency of friends, and only 4 per cent. being committals. The general result, all over, is estimated by Mr. Dalrymple at 34 per cent. as cured, 5 per cent. as benefited, and 6 to 7 per cent. as incurable; the cures in no case much exceeding 50 per cent. The average length of the cure is about three months. Having slept two nights and spent two days in one of the asylums, he considers their order and system as "perfect," and their comforts as even luxurious, in the case particularly of those who paid handsomely for admission. On the controverted question as to whether a patient might not safely be cut off suddenly from his liquor, Mr. Dalrymple, we are glad to perceive, avowed it as his "own opinion that there is not the slightest danger in cutting a man's liquor off altogether and at once, but," he adds, "you must supply that either by small doses of opium, or some other source of medicinal stimulus, rather than dietetic stimulus," and even that only for a few days or a week. He expressed it also as his strong opinion that the religious exercises observed in all these institutions are an admirable and important element in furtherance of their benevolent aims.

The evidence of Dr. Parrish, the first of the two American delegates examined, is singularly able and complete. He describes the medical head as king and father of the establishment, receiving the patients as into his family; having, however, his own apartments with his household; the assistant physician presiding at table with the patients; a matron attending to housekeeping; and religious services daily kept up "as part of the domestic life of the home." Each patient as he enters is duly registered, as to name, age, residence, status, relatives, business, and period of excess. A diary is kept by the assistant physician of his daily life; and a book of regulations is put into his hand, prominent among which is the express prohibition of the use of liquors on any pretence. He has his room, baths, and all he needs—the Russian or vapour bath being preferred to the Turkish—and his self-respect is trusted that it may be nurtured, by permission to visit Philadelphia, or adjoining places, as he proves himself

worthy of the privilege. In reference to committals, he describes the process in Philadelphia as follows :—

“The cases committed there are sent under two laws. There is a general State law entitled, ‘An Act relating to Lunatics and Habitual Drunkards.’ That law provides that any relative of an habitual drunkard may present his case to a president judge of the Common Pleas or Quarter Sessions. The judge appoints a commissioner, generally a legal gentleman of ability, in whom both parties have confidence. This commissioner calls a jury in his own office, so as to prevent any public exposure of the case, a jury, I think, of six men. Both parties, the drunkard himself and his friends, are notified that on a certain day the case will be heard; evidence is then brought forward to show that the man is an habitual drunkard, and incompetent to attend to his own affairs. If the evidence is satisfactory, the jury returns a verdict to that effect, and makes a report to the judge. The judge, under those circumstances, appoints a committee of the man’s person and estate, or two committees, one for his person and one for his estate, as the parties themselves may determine to be best. The committee has full power to take the inebriate, and put him where he will, in a prison if he is refractory, or in a lunatic asylum if there is any evidence of his partial or his entire lunacy, or in an inebriate asylum if he prefers it. Then he can transfer by power of attorney to the superintendent of the inebriate asylum the entire control of the individual, so that he has as much authority over him as a warder has over a convict in a penitentiary, but such extreme power is but seldom exercised.”

Dr. Parrish is eminently judicious and satisfactory on the subject of cures. The proportion he professes to have attained is 82 out of 235, or about one-third. As respects criterion of cure, he proceeds on the analogy of other diseases, and claims to have effected what cures he alleges on as satisfactory and permanent a scale as can be affirmed of any recovery. He never pronounces a patient cured till he has been watched and found to stand the test for a fair period after leaving the institution. Here is an interesting case, showing the length and strength of the sympathetic feelers by which the patients, after dismissal, are kept well in hand :—

“I may instance the case of a gentleman who came to the institution that I represent, a few weeks ago, and whom I considered thoroughly cured; after being with us he went away, returned to his business and was in the midst of temptation, in Philadelphia for two years. I frequently met him in the street, and I occasionally called at his business place to see him; he was doing admirably well, and the last time I met him in the street he told me that he could not be induced to taste liquor any more than he could eat the dirt that was in the street; but in a very little time he was back, and he returned under these circumstances: he had been very much pressed with his business, travelling about a good deal, and was troubled with some financial difficulties; he felt a desire for stimulants, and began to drink; first, I think, some beer or wine. He felt that the thing was overcoming him, but before yielding to his debauch, finding himself being enslaved, he immediately returned, and I suppose he is still there. But that man is nevertheless cured, in my judgment, because when he found that he was getting under weigh again, he was enabled to stop, and retire from the influences which were likely to overcome him. In a short time he will be able to go back to his business again, and perhaps, having tried the experiment, he will never again yield even to the taste of liquors.”

Another case may be added, as showing how agreeably the superintendents are sometimes disappointed, when slow to believe that the cure has really been effected :—

“ A young man some four years ago, without parents, and without friends, was taken in, merely as a matter of charity, and kept over six months. When he left, I considered him as ‘ Not cured.’ He went into the western country, and within the last few months I have heard from him that he has been thoroughly cured. During the time he was in, I thought he gave no evidence of that kind of manliness of purpose which would enable him to recover. When he was thrown out and obliged to battle with the world for himself, without having assistance from his friends, he summoned what manhood he had left, and he has now become a thoroughly sober man, though he was put down on the record as not cured.”

On being further questioned in regard to this case, Dr. Parrish rejoined :—

“ His brother told me [that he was cured] ; I did not take his word for it ; I was afraid to believe him ; his brother says that he has been thoroughly changed. It is impossible to determine positively, when a man leaves, whether he is cured or not ; he must be followed up. Sometimes some of the most discouraging cases will turn out well, and some of the most hopeful cases we are disappointed in.”

As illustrative of the principles set forth in the poet Burns’s much-meaning lines,—

“ What’s done we partly may compute,  
But not what is resisted,”

such interesting cases ever and anon transpire as the following :—

“ It is common with us to have persons under those circumstances who really want to recover and who cannot afford to be absent from their families a sufficient length of time, and they take refuge in an asylum whenever they feel that the attack is coming upon them. I know some business men who have this infirmity, and who when they feel that the attack is coming on, having an uncontrollable desire to indulge in excess, instead of getting on to a debauch, will run off from their counting-house to their homes, get a satchel, and come to Media, and stay a few weeks until they have bridged over this period. Their friends may think they have gone to New York or Boston, or somewhere else on business, and they go back again. By pursuing that course repeatedly, they get over the habit entirely. This is one very great advantage of institutions for that class of persons.”

Dr. Parrish is as strong as all the rest on the undesirability of sending drunken maniacs to a lunatic asylum, and he affirms it as the testimony of all medical heads of lunatic asylums, so far as he has come in contact with them, that these are not the places for them, and that the results are invariably unsatisfactory. On the condition between insanity and drunkenness, he read some interesting extracts from one of his own reports, and from other authorities. Among the rest, he quoted some statements from the Report of the Pennsylvanian Hospital for the Insane for 1870, according to which, of 5,796 cases of insanity,

only 446 are traceable to intemperance—a proportion immensely smaller than the popular estimate. Among the other causes, however, assigned in that report for the mental malady are just those which are constantly given for the inebriate cases admitted into the sanatoria, namely, losses, intense study, excessive business activity, disappointment, and the like, which indicate that if intemperance is not as often as is thought the cause of insanity, the two morbid conditions are often the product of kindred causes. On being asked if he would be surprised to learn that 20 per cent. of the insane cases admitted into our British lunatic asylums are put down directly to drink, Dr. Parrish replied that he was aware this was common, but gave it as his opinion that drunkenness was much less frequently the cause of insanity than was often thought; in illustration of which he mentioned that a gentleman under his care was committed fourteen times to a lunatic asylum for drunkenness, registered fourteen times on the insane list, and discharged fourteen times as cured of insanity; the actual truth being that he had never been really insane, but only in drink and in drink-mania, and that he was a smart lawyer, in full possession of his intellect, and at present engaged in a great deal of literary business. He quoted a series of declarations adopted by the “Association for the Cure of Inebriates” in 1870, which are to the following effect:—1, Intemperance is a disease; 2, is curable, in the same sense as other diseases; 3, springs from a constitutional susceptibility to the alcoholic impression; 4, this may be inherited or acquired; 5, alcohol has its true and lawful place in the arts and sciences, and is valuable as a remedy, though often under this name abused. The Doctor, in reply to a question on the transmission of drink tendencies, quoted some excellent observations on that subject from a paper of his own, which contained the following rather strong remarks of Maudsley:—“Multitudes of human beings come into the world weighted with a destiny against which they have neither the will nor the power to contend; they are step-children of nature, and groan under the worst of tyrannies, the tyranny of a bad organisation.”

The evidence of Dr. Daniel G. Dodge, the other American deputy, was of the same masterly character, and to the same effect. In reply to a question about the proportion of cures, he said that though at first he had set them down at 50 per cent., he found reason to reduce his estimate to about 40 per cent. Interrogated as a medical practitioner on the subject of habitual drunkenness, he stated his views at great length, and with much ability, pronouncing alcohol “the opposite of good,” though, “like other poisons,” useful in medicine. He quoted various authorities, and wound up by classifying inebriates, and illus-

trating the several varieties. He entered at length into the rules of the sanatoria.

The Appendix contains much valuable and suggestive matter in small compass. In the form of paper, its chief contribution is one by Dr. Alexander Peddie, of Edinburgh, who, many years ago, as we have seen, published his views in various forms on inebriate asylums, and who has never ceased to exert himself in promotion of this object. His paper consists of a valuable array of suggestions, and of results of professional experience, in view of the contemplated establishments of sanatoria in this country. Several tables are given in the Appendix by the Chairman and others, showing the appalling number of times that the same person has been convicted of drunken excess. Finally, the Appendix contains answers to queries that were submitted to the proper and competent authorities in France, Holland, Germany, Sweden, and some other continental nations, asking if sanatorial institutions for drunkards existed among them? and, if so, whether they had been attended with satisfactory results? In most cases no such institutions had been originated, and little of a definite or encouraging nature was elicited.

It only remains to congratulate our readers on the valuable body of evidence thus placed within our reach, as a fresh magazine of fact and testimony, in addition to the many such already in existence, out of which to draw, and use with effect, in the interests of temperance. As respects the specific object which the inquiry is meant to subserve, we cannot doubt, after the rich and animating array of pertinent and often spirit-stirring testimony here collected, and especially the telling facts from America, that the long desiderated sanatoria will soon be set about in earnest, and the requisite legislation for that end passed without further unnecessary delay.



### “INCENDIARY MEDICATION”; OR, DR. TODD REVIEWED.

ILLUSTRATIONS of the effect produced by the Medical Declaration are of almost daily occurrence. One little cluster of indirect fruit from it has just transpired in the republication, in a handsome professional form, of a review by Dr. T. P. Heslop, Physician to the Queen's and Children's Hospitals, Birmingham, which originally appeared, in 1860, in the *Dublin Quarterly Journal of Medical Science*, and therefore at a time, as its author remarks, “when English medicine, and English medical critics, seemed to be

bound, hand and foot, to the doctrines and practice of the eminent clinical teacher at King's College Hospital," Dr. Todd. He dates from the publication of that Review in 1860 "the beginning of another tone" on the alcoholic question, which has been growing and strengthening ever since. Not without justice, therefore, has the author yielded to the prompting stirred within him by the recent Medical Declaration to give his article to the world in a distinct and serviceable form. "If that Declaration," he says, "was needful, the renewed publication of this paper can hardly be mistimed."

We welcome Dr. Heslop's contribution towards the settlement of this important question, and none the less do we welcome it that it is in no degree written from the total abstinence point of view. Of this his readers are duly forewarned in the outset. "It will be a source of regret to me," he says, "if fanatics, whether of temperance or otherwise, seize the title of this *brochure* as offering support to their presumptuous statements." We quote the ungracious words to relieve Dr. Heslop of any apprehension on this score, so far as he is concerned. We are not so hard up for high medical testimony on our side to stand particularly in need of this contribution of his on the contemplated abuse of which he is so unnecessarily sensitive. At the same time we cannot permit him to say and unsay in the same breath—to give with the one hand and take back with the other. What he means by "the presumptuous statements" to which he alludes, we do not pretend to know. We can only say for ourselves, and, we take leave to add, for the total abstinence movement as a whole, that we profess no doctrine on the subject of alcohol but what chemical and medical science, in the hands of its competent and influential investigators, may seem to have fairly established; and whatever our own sentiments or preoccupations may be, we own ourselves bound to keep them sacredly in reserve, or, at the most, to give them but qualified expression, till the men whose province it is to settle such questions have furnished us with fair and rational ground for our assertions. Pending this, however, we do claim, Dr. Heslop's caveat notwithstanding, to plead his authority "as offering support" to our statements; nor will the Doctor, we presume, find any fault with this after what we have said of the rational mould in which these statements are cast.

We have reluctantly characterised the above-cited words as ungracious, for such they manifestly are. The "fanatics" are specified articulately only in connection with "temperance;" the vague word "otherwise" just admitting other varieties of the genus fanatic, but throwing over them all a courteous veil. For this we thank him not. None know better than he what fanatics there are in his own profession in the direction of sentiment on

the subject of alcohol very opposite to his own. And considering how often our great moral movement is branded by the drink-powers and their votaries, he might have spared us the renewed taunt, and done both himself and us the better justice of naming along with the term “fanatic” those to whom, in this alcoholic connection, it more particularly belongs—to wit, the indiscriminate champions, belauders, prescribers, and imbibers of the dangerous drug.

But putting all this aside, let us follow Dr. Heslop in such of his observations as bear upon our object, in the course of his review of Dr. Todd’s “Clinical Lectures on certain Acute Diseases”—a review which appeared in the medical journal above named some six months after Dr. Todd’s death. For the general tenor and tone and tendency of his able strictures we are sincerely grateful; and our hope is that they may tell influentially on all whom it may concern.

Dr. Todd’s book, he says, was evidently meant by its author to be a final and complete exposition of the notion that “much of the practice of former days rests upon the insecure foundation of a partial and imperfect diagnosis of the primary disease, and a very inadequate interpretation of the subsequent phenomena of the case.” In this there is, doubtless, much truth and force. The reviewer thinks that the lectures will be “a landmark in the medical history of our time,” indicating the furthest flow of resistance to the anti-phlogestic régime, and marking “the commencement of an ebb which possibly may not terminate in this generation.” This is very likely, as well as very desirable; for Dr. Todd, besides being in this matter bold in enunciation, was no less bold in execution. The fact affirmed by the reviewer that, with Dr. Todd, “the simple exhibition of an ounce of brandy every half-hour, and beef-tea and quinine enemata every four hours, do form, in very truth, the ‘law and the prophets’ of the *ars medendi*,” warrant the presumption that hardly any in the future will carry out the alcoholic doctrine further than he has done. The tide has culminated, and is already in rapid retrocession.

Dr. Todd’s fundamental principles are worth quoting, not only as indicating his starting point, but as being greatly preferable to the mode he took to give them practical embodiment. They are these:—

“1. That the notion so long prevalent in the schools, that acute disease can be prevented or cured by means which depress and reduce vital and nervous power, is altogether fallacious.

“2. That acute disease is not curable by the direct influence of any form of drug, or any known remedial agent, excepting when it is capable of acting as an antidote, or of neutralising a poison, on the presence of which, in the system, the disease may depend (*materies morbi*).

“3. That disease is cured by natural processes, to promote which, in their full vigour, vital power must be upheld. Remedies, whether in the shape of drugs, which exercise a special physiological influence on the system, or in whatever form, are useful only so far as they may excite, assist, or promote these natural curative processes.

“4. That it should be the aim of the physician (after he has sedulously studied the clinical history of disease, and made himself master of its diagnosis), to inquire minutely into the intimate nature of these curative processes; their physiology, so to speak; to discover the best means of assisting them; to search for antidotes to morbid poisons; and to ascertain the best and most convenient methods of upholding vital power.”

In these summations there is much that must be regarded as axiomatic, after conceding the utmost to the exceptions which the reviewer takes to them in detail. With the latter, however, we cordially concur in rejecting the conclusions deduced from them in favour of alcohol. On No. 1, Dr. Heslop justly protests :—

“We must, however, go even further than this, and ask the practical reader whether he has ever remarked, in fevers and other acute disease, a depression of vital power—a dull stupor of the nervous system—a perturbation of the whole functions, under an excessive administration of alcohol, which have rapidly been replaced by steadiness and calm after its withdrawal? Yet, in Dr. Todd’s view, alcohol necessarily exalts vital power, and strict diet as necessarily tends to reduce it. If we examine the proposition from another aspect, we can only use the words of Dr. Symonds, that our ‘memory swarms with cases, each pressing forward to be the first to give a wondering and emphatic refutation of this extraordinary dictum.’”

Further on, he truly remarks :—

“In such conditions as these it is more than probable that the profuse administration of alcohol may neither uphold vital power nor promote any natural process of cure. Dr. Todd seems to have had the keenest idea of the impropriety of embarrassing the *vis medicatrix* by bleeding, mercury, strict diet, and so forth; but it seems to have never occurred to him that the administration of a couple of imperial pints of brandy every day to a young girl in her teens, suffering from an acute disorder, may possibly disturb the natural evolution of pathologic processes to an infinitely greater degree.”

Thus the very methods taken by Dr. Todd to increase vital power are what subsequent experience and scientific inquiry have demonstrated to be the most effectual methods for reducing it. This was strongly affirmed in the discussional correspondence that appeared in the *Times* and medical journals after the issue last Christmas of the Medical Declaration; and on no point may prophecy venture to speak more unfalteringly than in predicting that the course of investigation in the future will only serve to set this fact in stronger colours and in clearer light.

Passing these preliminaries, Dr. Heslop follows Dr. Todd minutely into his array of cases. In these the great Coryphæus of stimulation credits alcohol with materially contributing to effect the cure, when the very particulars he gives furnish ground

for the retort which his reviewer is not slow to administer, that alcohol, so far from promoting, procrastinated the cure. It is the old fallacy of vamping up a *propter hoc* out of a mere *post hoc*, or, bolder still, out of a very *contra hoc*. We are reminded of Porson’s facetious remark in a letter, that, though seriously ill, nevertheless, by *neglecting to send for the doctor*, and resorting to some old remedy of his own, he was on the way of rapid recovery. Had Dr. Todd and his alcohol been a hundred miles absent, we cannot doubt that in many of these cases recovery would have been much more rapid. This Dr. Heslop unhesitatingly affirms. Referring to one of these—a case of rheumatism—he says:—

“For our own part, in the interests of truth, we must declare, most earnestly, that the case is a perfect illustration of the *nimia diligentia*. The disease was fast approaching to a natural termination on the 26th of September. Brandy was administered, and it took eleven days more to obtain the recurrence of a similar condition to that which existed previous to its administration. We are deeply impressed with the fact that there is no acute disease of a febrile nature which bears alcohol so ill as rheumatism; and we do not think that any physician can interrogate his clinical experience, his mind unbiassed by prepossession, without arriving at this conclusion.”

As these cases are arrayed by Dr. Todd as in various degrees corroborative of his favourite theory of stimulation, it may be useful to supply, in his reviewer’s words, a sample or two of them, in which the reflective reader will hardly fail to discern the strongest evidence of the diametrically opposite conclusion. Dr. Heslop says:—

“The cases are characterised by enormous stimulation, to an extent we have never seen in the wards of physicians renowned in this very branch of pathology, and which we have certainly never thought fit to imitate. Thirty ounces of brandy were given daily, during a portion of the time, to the first case, a large bony man, of strong build, thirty-two years of age. He died. The second case, age not given, took brandy and chloric ether. He died. The third case, a girl aged fourteen, took as much as an ounce and a half of brandy every hour for three days together, and for the next fortnight half an ounce was hourly administered; this latter quantity, however, being sometimes much increased as occasion required. She recovered under this astounding stimulation—a young girl fourteen years of age! The case is too meagrely reported for us to judge in detail of the effects produced by thirty-six ounces of brandy in the twenty-four hours, under these circumstances of age, sex, and disease; but we earnestly draw attention to a point which should never be lost sight of in judging of the treatment of a given case of fever: we mean its *duration*. She was admitted on the 26th of September. It is not stated how many days she had been ill previously. ‘It was not until the 1st of November, thirty-five days after admission, that she was in a state to warrant us in diminishing the quantity of stimulants; but on that day the pulse was 120. On the 4th it was 114, *falling under the diminution of stimulants*. She was discharged quite well on the 4th of December, having been about *nine weeks* under treatment. This case, therefore, warrants the opinion that the excessive amount of stimulants administered tended to the protraction of the fever so greatly beyond the average, and, in fact, to the extreme limit of the duration of enteric fever, of which form this seems to have been an example. But, it may be objected,

the case did well ; to which we reply, that young persons under fifteen years of age get well of *typhoid* fever, as a rule ; and, as regards the protraction, there is nothing whatever in the history of the case to account for it but the violent efforts ' to uphold vital and nervous power.' "

In the course of these clinical lectures Dr. Todd hazards some very strong expressions ; as when he says, " Often you will find it useful, *and always when there is a tendency to delirium*, to give stimulants, such as brandy or wine " ; and again when he asserts that the harm which stimulants do in disease is not only grossly exaggerated, but is *always due to the slovenly administration of them*. These and the like positions are met in this republished review with an emphatic contradiction ; and this protest is followed up and fortified by an analysis of the paraded cases, with the general result of finding them strongly illustrative of the power of alcohol to *hinder* cure. Well does a French physician name it the method of " incendiary medication." Dr. Walsh, too, pointedly observes :—

" The announced success of the treatment by copious libations of brandy appears simply to furnish a fresh illustration (as conversely Bouillaud's alleged triumphs by his *saignées coup sur coup*, in genuine ' typhoid ' Peyerian fever) of the wondrous power of the *vis medicatrix naturæ*."

There is a fascination about a theory, as theory, even though a bad one, which to its fond propounder makes darkness light, and holds its own triumphantly in the very shadow of death. It is well to contemplate a hobby when ridden at full speed, being next door to a breakdown or a *reductio ad absurdum*. We shall, therefore, give our readers the opportunity of beholding " Toddyism " in its boldest mood, and at its best estate, in the following further quotation from Dr. Heslop's review, with which we shall bring this paper to a close :—

" The concluding lecture is upon ' the therapeutical effects of alcohol,' which we will venture to call a misnomer. ' Poisonous effects ' would have been a more correct term, as the main cause of the lecture was the case of a child, three years old, admitted into the hospital, labouring under the effects of the administration by her mother, at one dose, of two ounces and a half of gin. Convulsions came on, and left hemiplegia. On the day after admission the patient was becoming exhausted, so a teaspoonful of wine was given every second hour. The next day she was worse ; on the fifth she died. The brain was found to be very pale. What is the author's commentary on the case ? Here are the last three sentences of this remarkable man's last book :—' Were I to treat such a case again, I would give wine or brandy more freely than was done in this instance, and I would also administer by the rectum quinine with a small quantity of brandy. You will find this often a very useful practice where the powers of life are low, and it *ought not to have been omitted in our little patient's case*. But she showed so little power of reaction, that it is in the highest degree improbable that any further treatment would have been successful.' The end ! We see here the influence of a ruling idea. Exhaustion, no matter how produced, seemed to the author in nature one and indivisible, and suggests alcohol as a matter of self-evident necessity, even when brought on by alcohol."

## THE *LANCET* ON THE CAUSES OF INTEMPERANCE AMONGST THE MIDDLE CLASSES.

THE article from the *Lancet*, which we reproduce on another page, deserves the careful attention of the readers of that journal. Although the writer thereof does not see eye to eye with the advocates of total abstinence, and indeed is anxious that this should be understood, nevertheless he proclaims some plain truths concerning the danger frequently associated with the use of alcohol, which are of serious import. He takes exception to the opinion, which he believes is commonly held by teetotalers, that drunkenness is chiefly attributable to our "social customs;" he is inclined to think that "(except amongst the lowest classes) conviviality and intoxication do not go hand-in-hand together." He is of opinion "that the chief source of drunkenness arising from accepted customs would be the practice of taking 'nips' at odd hours of the day," and he believes that "there are many reasons why this practice is on the increase."

Now, on these points the editor of the *Lancet* only differs from the teetotalers thus far—the latter take a broader view of the conditions which operate than he does; their generalisation is more comprehensive and complete than his. Where there is much social drinking at night, there will be visits to the decanter in the morning, and there will be "nipping" at odd times during the day. The pleasures of the night too often unfit a man for the business of the morrow, but that business must be got through, the flagging, weakened brain must be whipped, and, if necessary, lashed into putting forth its utmost efforts. When the race is over for that day, the nervous force of the victim is thoroughly used up. What with the punishment he has received, and the work, the wear and tear he has been subjected to, he is often in a painfully exhausted state. He has no relish for food, life has no pleasures, home no charms, wife and children inspire no joys—he alternates between feverish excitement and painful collapse. He retires at night to rest, but his sleep is disturbed; he rises unrefreshed, weak and depressed. He flies to gin and bitters, or brandy and soda, to give a fillip to his feeble appetite, and to enable him to get down food, which his weak stomach will be unable properly to digest. He goes to business again, feeling, if possible, more weak and weary than when he left it on the previous day. To meet the demands made upon him, especially when affairs are somewhat adverse, he flies to the bottle. What is the result? Here is the reply of the able writer in the *Saturday Review*, in the article on "Countinghouse

Alcoholism":—"Ask any doctor who has had much to do with City men, and he will tell you of the terrible increase of paralysis amongst this class. A yearly list of the number of young men who either perish in this melancholy way, or are reduced to perfect imbecility, would startle those who have never had their attention called to it."

The writer in the *Lancet*, describing how mercantile men seek to meet extra strain, or meet bad news, says:—"Thus it befalls that so many offices have cupboards in which sherry and bitters are found; and the habit of using a stimulus as a spur to the overtaxed or jaded faculties is one which grows apace."

So long as men trifle with articles which are so perilous, which exert so injurious an influence, which are dangerous in proportion as they please, which soothe only to irritate, which ensnare by their fascinations, which enslave in proportion as they delight, which seduce only to destroy, so long shall we have reason to mourn over the wrecks and ruins of humanity, over the loss of men who once bade fair to achieve wealth, honour, happiness, to be ornaments to society, enjoying in perfection life's greatest blessings. It is extraordinary, however, how public teachers, writers, and the friends and acquaintance of the victims of drink will ignore the true causes of the mischief. We hear much said about overwork, the strain of business, the anxieties of speculation, but we rarely hear of the agent which, by weakening the nervous system, by destroying the natural appetite, by disordering the circulatory, secretory, and endosmotic processes on which digestion, nutrition, and innervation depend, make work difficult which would otherwise be easy. We hear nothing of the reckless engagements entered into under the excitement of sherry, brandy, or champagne. We are told that it is the pace which kills, but we are not told of the alcoholic whip and spur which are applied to the sides of the weakened and jaded racer, impelling him on when his strength is spent. "The conditions," says the *Saturday Review*, "under which mercantile work is now-a-days carried on are such as to tell severely on the nerves, but not the less is it true that they are only indirect, not direct, causes of the wasting disease and high rate of mortality which are now becoming such marked features of City life. It is the free use of stimulants during working hours, enfeebling the mind and paralysing the frame, which makes the work so fatally exhausting."

A knowledge of the disease is half the cure; what, then, is the cause of this terrible disease? The *Lancet* tells us that it arises from "the practice of taking 'nips' at odd hours of the day." "The 'nips' destroy the already weakened self-control, and lead to drunkenness." The *Saturday Review* says: "The American bar system which, in New York and elsewhere, has been carried

to a height at which, through being so flagrantly scandalous and intolerable, it has almost begun to cure itself, has, unfortunately, taken root in London and others of our chief cities. . . . The habit of taking irregular ‘nips,’ ‘pegs,’ ‘pick-me-ups,’ or ‘eye-openers,’ as the Yankees call them, is established amongst us, and seems to be rapidly gaining ground.” Thus bad begins, but worse remains behind. “The bottle in the private room is the most alarming phase of mercantile alcoholism, for the tippler helps himself as often as he likes, the temptation is ever present, and wine is apt to be supplanted by gin or brandy.” It is beyond question that the potations of City men are terribly on the increase. “Oh, everybody does it,” is the excuse; and “Can’t get on without it,” after a time, is the confession. The two eminent writers seem, then, to agree that the cause of the prevalent drunkenness amongst mercantile men is “nipping” during business hours. What, then, are the remedies? The writer in the *Lancet* says:—

“We would urge, therefore, upon all who would promote temperance, and especially upon medical men who are consulted with regard to habits of life, that they should do all in their power for the suppression of the occasional stimulant which is taken between meals, and which is not called upon to go out in action.”

The *Saturday Review* declares:—

“The remedies for the present melancholy state of things must be sought in resolute abstinence from all stimulants during the hours of work, and in the endeavour to reduce, as far as possible, the worry and fatigue which usually attend the daily life of the man of business.”

The writer of the *Lancet* article declares that he does not yield to Mr. Bowly himself in clear perception of the injury done by excess; the *Saturday* reviewer would avouch the same. But the difference is this: Mr. Bowly’s diagnosis is more complete than theirs is; he not only clearly perceives the evils of excess, but of that which leads thereto. If the editor of the *Lancet* made the discovery that City men were ruining health and happiness by taking morphia or laudanum at odd times during the day, would he confine his injunction to business hours,—would not he have as clear a perception of the remedy as Mr. Bowly, and would not his remedy, like that gentleman’s, be sharp and short, included in two words—“total abstinence”? The victim would be told, “You must give up this practice, not only during the day but at night, for if you indulge out of business hours you will find it almost impossible to resist the craving for more afterwards.” This is the only safe ground on which the drinker can stand. Mr. Bowly places his feet on the dry earth; the *Lancet* writer leaves

him on the oozy sand, which may prove treacherous and swallow him up.

Our thanks are due to the *Lancet* writer for again raising a warning voice on the subject of Drawing-room Alcoholism. He shows that whilst overwork may tend to foster intemperance in men, idleness and vacuity are its chief predisposing causes in women. For consolation in their disappointments, alcohol is resorted to; the lady feels a little "low" and must have something to support her, and eau-de-cologne is apt to be replaced by brandy, and the inevitable result follows. Surely the time has arrived when men holding high and responsible positions should boldly face this terrible and growing evil. The alcoholic beverages which produce such disastrous results amongst all classes of society, it must be admitted, are not absolutely needed as articles of diet. Tens of thousands of persons by long experience prove in our midst how well and how easily these drinks can be dispensed with, and if they were banished, what a vast amount of vice, misery, disease, and shame would also disappear! No one need fear that there would be any decrease in conviviality; we should still continue to enjoy "The feast of reason and the flow of soul." Our joys would not be so hilarious, but we should not suffer the collapse too frequently and too bitterly the result of alcoholic revelry. Our pleasures would be calmer and more enduring; in reality, by economising our happiness we should have a constant supply, out of which we should be all the more able and willing to help our neighbours. The sound philosophy in relation to the evils of alcohol, is total abstinence. One day this lesson will have been learned, and *Lancet* and *Saturday* reviewers will not hesitate to declare it.



## Miscellaneous Communications.



### CONFERENCE AT BIRMINGHAM WITH THE MEMBERS OF THE BRITISH MEDICAL ASSOCIATION.

THE members of the British Medical Association met in Birmingham during four days in August at their annual conference, and, as on three former occasions, the Committee of the National Temperance League

seized the best opportunity at their command of laying the claims of the temperance movement before them. The first of this series of conferences organised by the League took place at Leeds in 1869, when 150 gentlemen

responded to the League's invitation to breakfast. On the second occasion the conference took place at Newcastle-on-Tyne, when eighty medical practitioners were present, and a wholesome discussion ensued. The third gathering of this kind was held last year at Plymouth, when 110 gentlemen attended, and the speeches delivered bore marks of a decided advance in medical opinion on the non-alcoholic treatment of disease. By far the most important conference of the series was that held on August 8th, at the Royal Hotel, Birmingham, when no fewer than 150 medical gentlemen were present. A substantial and well-served breakfast was provided at eight o'clock, and about an hour later the conference commenced, which was opened by Mr. Charles Sturge, J.P., of Birmingham, who occupied the chair. He said he was sorry that Mr. Samuel Bowly was not able to be present, but he was sure his absence would be excused when he mentioned that the cause of it was the marriage of his daughter that morning, and especially would it be excused when he added that a medical man was to be the object of her choice. (Cheers and laughter.) In Mr. Bowly's absence, he would call upon the Rev. G. W. Olver, B.A., Principal of the Wesleyan Training College at Battersea, to address the conference.

The Rev. G. W. OLVER then addressed the conference as follows:—I would first add my own thanks on behalf of the National Temperance League to you for so very large an attendance here this morning. I am aware that you are gathered in Birmingham in connection with your Medical Association, and that you have other engagements which will call for your time and thought in the course of the forenoon. I do not, therefore, propose to occupy your time at any length, rather because we are very anxious to have something like a general conversation amongst yourselves on the very important subject which has called us together. I need not tell you that the drinking customs of our country are a very

fruitful source of evil in everything which affects man. I might be expected, perhaps, at another time to speak mostly upon the religious and moral aspects of the question. It is my duty at other times to dwell upon the more directly social, and sometimes on the sanitary, aspects of the question, but our attention this morning is to be directed, if possible, to the medical aspects. Now, in struggling with an evil which is destroying scores of thousands of our fellow-men year by year, and at the same time is ruining hundreds of thousands of homes, we look about us as a matter of course for allies in every department of science and of thought. I had the satisfaction of feeling this morning that whilst I stand here somewhat as a Christian minister, I am speaking to a number of gentlemen whose daily work and calling is very closely allied with my own. How frequently and how intimately your labours and ours are associated in the sick room, and especially by the dying bed, I need not tell you. And how far it is an advantage to us to be able to look upon our patients with some slight knowledge of medical matters, I need scarce tell you. Again, how far it is an advantage to you, gentlemen, to be able whilst you are ministering to the body so far to understand the mental and moral bearing of your patients, as to add now and then a word of counsel and comfort by the way, you know too well for me to say anything with reference to that subject. I am speaking to you this morning as gentlemen gathered in Birmingham in connection with the Medical Association. It strengthens me because I know that you look upon your profession not merely as a profession; you recognise something above the mere profession of administering medicine, and thereby obtaining a means of living—you recognise that medicine is in itself a science, and that there are great principles to be recognised, and that the application of those principles to the welfare of man is worthy of your time and attention beyond the mere daily routine of your

lives. I am persuaded that I am speaking to those, too, who recognise the fact that by means of medical art and science it is worthy of your ambition to endeavour to lift up altogether, not only the physical condition of your country, but also the moral condition of your country. Now it is with reference to this bearing of temperance upon the social condition of our country that we ask your time and thought this morning. It is not for me to enter into the directly medical aspects of the subject, as for instance, a question that is very interesting to myself, and I think if I were a medical man would command a very large portion of my leisure time—what is the real action of alcohol upon the human system, and how far alcohol in its action upon that system is really a stimulant or something else, and how far the symptoms which appear to be the symptoms of a stimulant are primary, or only secondary. In my intercourse with medical men from time to time these are questions which do turn up, and by the way, I would be bold to say that there is scarcely any subject in which I take a deeper interest than that of medicine. But there is beyond that a further question, and that is the necessity or otherwise for the use of alcohol as a medicinal agent. Now, I am speaking in the presence of gentlemen who are well aware that this question at the present time divides more than ever the members of your profession, and we are thankful to know that there is a very large and increasing class, in which are to be found members of your own profession, who rank highest in your own esteem, who have declared and do declare—many by public, and many more by private assertion—that alcohol, in such a form as that of the ordinary beverages which contain it, is not necessary as a medicinal agent. There is a further question to which we would ask your attention, and that is, how far the habitual use of alcoholic stimulants is a hindrance in the path of your own success? If you will forgive a personal allusion, I may mention that it was my misfortune

two years ago to be laid aside by a terrible railway accident. I put myself in communication with a gentleman whose name will be known to many of you—Mr. Erichsen, of London—and one of the first questions he put to me was, “Have you been in the habit of taking alcoholic stimulants?” My answer was, “No, I am a teetotaler.” “I am glad to hear it,” he said, “for if you had not been, I should have ordered you to abstain entirely.” I am thankful to add that, without a single drop of stimulants in any form, my medical attendants by their kindness and skill so far brought me round that, although for a considerable time I was unable to make my appearance in any public service, I have so far recovered as to have the pleasure of standing before you this morning. (Cheers.) I put it to you, gentlemen, whether you do not find in your own private practice that, having two cases put into your charge, in other respects being entirely equal, whether it be of acute disease, or whether it be a case of severe fracture, or any surgical operation, you do not *feel* as you enter upon one of them that the chances are immensely in your favour if your patient is a total abstainer—(hear, hear, and cheers); and if, on the other hand, you are not conscious from the beginning that your difficulties are enormously increased when your patient has been in the habit of freely indulging in stimulants? Then there is beyond that, gentlemen, a further question, and it is as to how far it is your (may I say so?) obligation and duty to draw a very clear line in your intercourse with us, as your patients, between the use of alcoholic stimulants as a medicinal agent and the use of them as ordinary beverages? (Hear, hear.) We regret to say, and it is a fact probably known to you all, that there are hundreds of thousands to whom alcoholic stimulants are recommended for medicinal purposes, who, by the very influence of those stimulants grow into the habitual daily and excessive use of them. (Hear, hear.) I feel a little difficulty in saying what I am bound to say

upon this question this morning, but I stand here with a very deep sense of injury at this moment. A dear friend of mine, a man of large heart and generous purpose, a man of great mental power, with whom I stood side by side twelve years ago and laboured in the cause of truth, morality, and religion, had a severe attack of rheumatic fever. How far the heart was left affected by that you may judge. There are two or three medical gentlemen here who I understand will appreciate at once what I am saying. How natural it was in those days for his medical attendants to recommend the use of alcoholic stimulants, you are also aware. He followed their advice day by day as occasion required. Week after week, and month after month, the use of stimulants was resorted to, and it is now my terrible sorrow to say that within the last week I have had to take part in the exercise of discipline upon my own friend, and to put his name altogether out of sight of the public as a Christian minister, because those alcoholic stimulants had not touched the largeheartedness of the man, but by a process of physical poison had week after week, and month after month, and year after year—I am only stating my own belief and view of the question—by a process of physical poison had so entirely changed the man's whole brain and system that everything that was truly noble is lost sight of, and he is, for the present, at all events, a wreck of what he was. I mention that simply as an illustration. And now, gentlemen, we do implore of you personally, and collectively as a profession, to give your earnest attention to this matter. Let me say that if you do not in this respect help us—I will not say by public avowal in every case—but at all events, if you do not see your way individually to a public avowal, unless you help us in your private practice—I do assure you that of all the classes of men with whom we have to do, it is in your power the most effectually to hinder us in all our efforts. (Cheers.) The question of stimulants is a physical question first

of all; and to whom will men look rather than to their medical advisers? If you will aid us, and withdraw what is supposed to be the broad and the general countenance and support of the medical profession, then, gentlemen, we shall hail you as amongst our most effectual allies, and with your assistance we do not doubt that our progress, hitherto encouraging, will be more than ever rapid, and without doubt the country will have the benefit.

Mr. THOMAS TAYLOR, F.R.C.S., whom the chairman introduced as the oldest practitioner in Birmingham, next addressed the meeting. Gentlemen, I am taken by surprise by our President, who has asked me to address you, for those who know me are aware that I never made a speech in my life, but touching this subject of temperance, I may say that for a long time in my own practice I have advocated that principle. I do not think there is any man in the profession who has for the last forty years been more careful in recommending stimulants to his patients than I have. I am fully satisfied that the use of alcoholic drinks is at the root of a great amount of mischief. The death of thousands annually and the utter ruin of many families are due to intemperance. That is beyond all question. I have in my own family thought that my children would be benefited by beer at dinner, but still I have kept it from them, being satisfied that they could do without it, if they had simple water and good wholesome food. I have always throughout my life been very careful in recommending stimulants, and it has fallen to my lot in many instances—in cases of extreme danger, where I have felt it to be my bounden duty to give brandy, and that liberally—I have stood over my patients one, two, and three hours, struggling for life, not knowing whether they would live or die. I have often found myself called upon to give brandy, and I believe that the profession generally will continue to do so. There is, however, a line to be drawn. I have myself seen mischief arise from the prescription of alcohol, and I have

known it lead to tippling. A case came to my knowledge within the last twelve months of a lady who struggled between life and death for several hours from *post partum* hemorrhage, who was prescribed for in this way, and who became convalescent. I did not see her again for months. I was called upon one day by a member of the family, who said, "Mr. Taylor, my sister tipples, and has continued to do so ever since you gave her the brandy in connection with her dangerous illness. Whatever you do, do not recommend it again if you can help it, but don't let her know that I have said a word to you about her." I called upon my patient, talked to her, and she left it off; but I do not doubt for a moment that there are very many who fall into tippling habits in consequence of such recommendations. Therefore it is the bounden duty of us all, when we are called on to recommend brandy in a dangerous case, to very carefully draw the line of demarcation. Let us do all we can as a profession by keeping our attention directed to the judicious use of alcohol, and by seeing that it is not abused. That is the sum and substance of medical practice. I can assure you that this subject will always have my consideration.

Dr. HENRY HARRIS, of Redruth: I quite agree with what has been said by the two former speakers. I have seen much of the evil which the intemperate use of alcoholic stimulants does in society. I have seen disease brought on by it, and as a rule I avoid prescribing it as much as possible. For many years I never did order it, but I found that for certain diseases somebody suggested to me the propriety of my ordering it, and I did to a person who is very extreme on these matters, but found it did not succeed in practice. I believe strong drink sends many to the asylum and to the prison, and, as a medical officer, I know that the non-alcoholic treatment of disease has been very successful, and the guardians know it too. I believe if we were to adhere to that course, the world would be better than it is. I admit that there are certain

cases where it is necessary, but these cases should be treated very carefully.

Dr. MELSOM: I feel that you are surrounded by a great number of very distinguished medical men from all parts of the kingdom, with whom we are much less familiar than some present, and therefore we must desire that they should say all that they wish to say on this question. I have had the greatest delight, in common with others present, in listening to Mr. Olver, and to see such an assembly as the present. I think he and the National Temperance League may take the presence of these gentlemen as an indication that they agree with them in those general principles which have been so beautifully laid down by Mr. Olver, and which have been spoken to by our friend Mr. Taylor. I presume there is not a medical man in this assembly but would give as his verdict to the observations which Mr. Olver has made—"Good and correct." Still there are questions of degree. I suppose medical men, generally speaking, are amongst those who of any class of people use the very smallest quantity of intoxicating liquors. I believe it is a fact that if it be known that there is a dinner of medical men in London, that the host will put it up for a smaller sum than he would for an equal number of lawyers or even parsons. I believe that is the fact, and have even heard it stated in this room on unexceptional authority. We know better than to addict ourselves to the use of alcoholic stimulants. Still, I dare say among the teetotalers that have been here to-day there are a good many that are teetotalers only "between drinks." Speaking personally, I have had a very great delight in witnessing the progress of this society. I was a teetotaler when teetotalism first began, and I owe a good deal to the fact that I did abstain, and that most rigorously, for many years of my early life, and at a place where very few are found following such a course—Trinity College, Cambridge, where the best old ale in the world is to be found. I went through the undergraduate curriculum as a teetotaler, and remained

so for many years. I was a teetotaler thirty-five years ago, when Father Mathew made his *début* in Birmingham, and presided over his meeting, and ever since I have felt a strong attachment to the teetotal question. But still I can't say I am a teetotaler now, and I think Mr. Taylor has put it well when he said in so many words that it is after all a question of degree. Suppose you are called in to one of these cases, such as the case Mr. Taylor has been describing, you must have a stimulant it is quite certain, and the question resolves itself into, What stimulant will you choose? Time may be of value, and chloric ether may not be at hand. You look round and are glad to lay your hand upon almost anything, and if it were even gin you would be glad to give the patient a tablespoonful or more until you found that the powers of life were in a state of recuperation. I do not see how you can obliterate the use of alcoholic drinks altogether from the medical question. I think the words of wisdom which have been spoken this morning will have a very powerful effect upon our minds, and I hope through us on the profession generally. If on any occasion we find it absolutely necessary to administer a small quantity of alcohol, let us see that we do not allow the thing to remain just where we left it, but to supervise it until we see that there is no habit contracted, and that the evil is removed. But I think Mr. Olver himself would not say that under such circumstances as Mr. Taylor has described, no other stimulants being available, he would refuse to allow the use of a small quantity of the only thing that could be got at—a dose of brandy. I put it to Mr. Olver, whether he would let the patient die, or allow a small quantity of brandy to be administered?

Mr. OLVER: I have no hesitation whatever in answering that question, so far as my own opinion is concerned, that I would not let a patient die if I could keep a patient alive. Dr. Melsom will kindly bear in mind that one of the questions I raised for the consideration of the medical profession—

I believe I shall not be so wanting in modesty as dogmatically to pronounce upon a medical question—is whether there is any stimulant, where a stimulant is necessary, which can be substituted for alcohol in the general practice of the profession, and which would not be liable to be made use of as a beverage.

Dr. MELSOM: That is a very important question.

Mr. OLVER: But to the question abstractly put as Dr. Melsom has put it. I do not suppose, indeed I have never met with any gentleman yet who would say that if there was nothing else at hand, and a little alcohol would keep the patient alive, the man was to go upon the hard and dry principle of letting a patient die rather than touch alcohol.

Dr. MELSOM: Then I think that settles the question. We are all fully alive to the importance of restricting as much as possible the prescriptions of alcoholic stimulants. None will deny that the constant use of small quantities of brandy is about the most prejudicial thing that can befall the human constitution. After making one more observation, I will apologise for obtruding so far upon your notice, and sit down. I remember that a dear friend of mine, a distinguished man in this town, of extensive commercial engagements, became ill, and that I was in the sick room with Dr. Ingleby and Dr. May. There were three of us in attendance upon this merchant. Dr. May said to me, "A man may get drunk once a month with impunity, but if he takes his glass of grog daily it will find him out sooner or later." That I believe to be an inexpugnable and irrefragable fact. I believe, nay I am sure, that that is the case with the tissual condition of the liver, and that an absolute disorganisation will sooner or later take place. The liver is no longer competent to perform its main function, that of the decarbonisation of the blood. The consequence of that is that the blood becomes impregnated with all sorts of impurities, and though the thing for the time being seems to afford the only palliative, it

is but a matter of temporary relief to be followed by reaction and ultimately by death. I am sure that the practice of taking one or two glasses of grog a day is the most dreadfully destructive that obtains in social life. (Cheers.) As to its social effects, it is really almost absurd to speak about them. I have not sat upon the bench in this town for more than thirty-four years (and I had five mortal hours of it yesterday), until I have achieved the great distinction of being the senior magistrate in this borough, without having to confront every day of my life the dreadful effects of drink. It is not only the effects of drink personally, but relatively. Yesterday we had an enormous number of children—boys of ten, twelve, and fourteen. They were so numerous that at last my friend Mr. Poncia dealt with cases three in a batch. What is to be done with such persons, or for them? The industrial schools cannot deal with them, and they are not the sort of people to send to prison. Their parents ought to go to prison; they are but victims of the intemperance and negligence of those parents. No one can refuse to acknowledge that it is this constant tipping that fills the hospitals, the gaols, the lunatic asylums, and it does more than three-fourths of all the abomination that is done in this country. That is my testimony, and it is testimony founded on a protracted judicial experience. It is also a well-advised testimony. I altogether oppose the ordinary drinking customs that are so common in society, and I am sure that we as medical men should do well to put as heavily as we can our hand on drinking in every possible way.

Mr. JOHN LIDDLE, M.R.C.S., of London: I am one of the medical officers of health for a large parish or district in London, and have been all my life. I may say that living amongst the poor of that district, the question of alcoholic stimulants has not been responded to as I hoped it would have been from the attention given by us to Mr. Olver, as to its physical effects upon the constitution, whether pri-

marily or secondarily. It may be the opinion of some persons that alcohol is not a stimulant, but how far that is true or false I will not say. I hope there may be some pathologists present who will give us some information on the subject of the effects of alcohol upon the system. I have just now heard it stated that parents are very much to blame for the drunkenness of their children, but I would ask who is to blame for the neglect of parents? Are we not our brother's keeper? but do we act upon that principle? I trow not, for we leave them entirely to themselves, and what do we find as the result? We find persons living in the utmost degradation—men and grown-up women living in the same room. We find them living in overcrowded houses, and hitherto we have not paid that attention to their physical condition which it is the bounden duty of persons who are in a better position to do. By attending to this, you would to a very great extent destroy their desire for intoxicating drinks. I should like, in order to win persons from the publichouse, to adopt the plan of placing alongside of them something better and more attractive. I am pleased to see that here in Birmingham you are far in advance of us in London. You have here a magnificent institute to which persons can go for amusement and instruction, and this we have not in London to the same extent. We have not an open library in London to which persons can go to read and take books home with them. I have also been exceedingly pleased with the entertainments given in your Town Hall of classical music, and to see how highly they have been appreciated by the working classes who were present at them in large numbers. Things of this kind will tend very much to win persons from publichouses, and I do think that if we paid more attention to the physical condition of the people, and gave them places of recreation and of innocent amusement where intoxicating liquors are not allowed to be sold, we should make a great step towards the point at which we are aiming.

Dr. THOMAS BALLARD, of London: A few more words in reference to that point which was so forcibly put by Mr. Taylor, in reference to the use of alcohol in the case of a woman bleeding to death. It occurred to me that I might say something with reference to that which will favour very much Mr. Olver's views. He stated that it was a very important question for our profession to consider the value of alcohol for our patients. We have all been brought up with the prejudice which we received in our training that these remedies are actually necessary in many cases, but what I wish to state is this, that I was present lately at a lecture given by one of our most eminent working pathologists, and the conclusion to which he had come as regards the use of alcoholic stimulants had reference to this particular point. It was impressed upon us as the result of his experiments that to a woman in such a condition as Mr. Taylor described, the very worst thing that you could give her was brandy. I wish to let this go forth because that is the conclusion arrived at by one of the most careful and painstaking workers in physiology of the day. Such, I repeat, was the conclusion he arrived at, and enunciated in a lecture the other day. (Cries of "Name?") Dr. Richardson. I merely state that to show that at any rate the question is debatable. We all know the physical and moral results. No class of people know this better than the medical profession. We are all prejudiced in favour of the use of stimulants in the case that has been alluded to, but here is a hard-working scientific man who comes to the conclusion that we are mistaken in that particular, and, therefore, it shows that so far the question is not decided, and it shows also that further earnest inquiry is necessary, as has been mentioned by our rev. friend. This was the result of many experiments that Dr. Richardson made as to the use of alcohol, although I am not prepared to enter into a description of what those experiments were. He took the temperature of animals, to

whom he administered it, and found that this was lowered, and the heart's action was quickened. The principle upon which he arrived at this result was that it stimulated the action of the heart and arteries at the time he wanted them really to be at rest, and that the safety of the patient would be much more insured by letting the vessels be at rest than by stimulating them with alcohol.

Dr. KEALY, of Gosport: You will, I hope, allow me to reply in some measure to the remarks of the last speaker. I should not have intruded myself upon you but from the conviction that it is a matter of duty. I think I need hardly appeal to your feelings as husbands whether, in the critical moment which perhaps determines the existence here or otherwise of your wives, you would not expect your medical man to be fully conversant with, and to use, every and any means possible to save so valuable a life. Therefore it becomes a very important question, what is necessary under the dangerous circumstance of hemorrhage, and what have we at hand? Now I cannot call to mind any potential means equal to brandy under the circumstances mentioned by Mr. Taylor, and, by way of illustration and digressing for a moment from the point, I would advert to its use. I may mention a case of erysipelas I had under my care a little while ago, of a very abstemious woman in advanced life who was apparently dying. I must say, first of all, that I am a pupil of Dr. Todd's, and you all know that he was really the man who originated the treatment of disease by stimulants, and I saw a great deal of his practice at King's College Hospital. I looked at this woman, and felt that she must go unless I gave her brandy. I have a great prejudice against doing so, because I have seen so many patients, under the excuse that they were primarily recommended to take these stimulants, continue their use. However, I used the brandy under my own observation, and in twenty-four hours that woman took the whole of a bottle. She recovered; but I shall not base

my argument upon that fact, but that I saw most clearly that as the disease was subsiding, so she became less and less tolerant of the brandy, and I withdrew it, giving it at greater intervals until it was withdrawn altogether; and that woman has remained a properly-conducted woman ever since, the same as she was before. Therefore I am justified in considering that that is a life saved by the use of brandy; and I do not think it would do for us to run off with the idea that when a woman is bleeding to death we should not, because some people think so, use alcohol if we think it necessary. Until we provide as effective a substitute, we must use alcohol or some such medicine.

Mr. SAMUEL LORD, M.R.C.S., of Hampstead: I trust that this meeting may not pass into the consideration of a question with which it has little to do. If you come to extreme cases you must nourish and support life. That the "liquoring up," as the Americans call it, is one of the most destructive practices to the body and spirits, I fully grant, but I have been surprised to find that none seem to have raised a voice simply and purely in favour of temperance—moderation. The use and not the abuse is what we should aim at in regard to those materials set before us whereby we may enjoy health and long life, and conduce in our own existence to more enjoyment, and make us more thankful to God for all his gifts. I object to the moral bearing, the one-sidedness of teetotalism. I consider it is our duty to cultivate a high condition of moral power, and not to abnegate a thing because it is frequently abused. I believe in moderation in all things.

Dr. GROSS, of Philadelphia, United States: I will add my feeble testimony to what has been said on this subject. We may assume as an established fact that alcohol in some form or other is necessary in the treatment of many cases of disease and of accident: in fact we have two classes of disease and accident—the one requiring stimulants and the other not. The question arises, if a stimulant be necessary what

should be the character of that stimulant. Should it be alcohol, should it be ammonia, should it be chloric ether, or should it be something else? I think we may assume that it is a well-established fact that alcohol is a life-supporter, and that ammonia and chloric ether are simply temporary stimulants necessary frequently for the moment but not beyond that. Alcohol, on the other hand, supports the system as we well know in persons who are habitual drunkards—men who do not probably for weeks take an ordinary meal during the whole of that time—who take little bread, who take no meat, but support themselves entirely in that way. We therefore assume that it is a nutritious substance, that it supports the system, and therefore is far better in every respect as a stimulant in low typhoid conditions of the system, whether the result of disease properly so-called or the result of accident. But it is the abuse and not the judicious use which we have to deal with as a profession—and this abuse, allow me to say, had its origin in the latter part of the last century in Scotland, and it has been revived in our own day by Dr. Bentley Todd, of King's College Hospital in London. A similar doctrine prevailed previously, but fell into disrepute until it was revived by Dr. Todd, who being a man of authority, a man probably of eloquence, a capital writer, and a successful public teacher—every man swore by him, every man became his follower, every man imitated his practice, and thus has arisen the free use of alcohol. How many of us are there in the profession who pin our faith upon the sleeve of a man of authority, and hence we are constantly going adrift, much to the discredit of the profession, and much to the detriment of the influence which medical men would otherwise be destined to exert over the community. It is the abuse, and not the just and proper use of alcohol where the difficulty lies. I hope I may make some impression on this meeting when I say that in some cases the use of alcohol is indispensable. There is no other medicine or stimulant that can

possibly take its place. In such cases it is nothing else than a medicine. There is no other article in the *materia medica*, either single or combinatory, that will answer the same purposes.

Dr. HENRY STEWART, of Dublin: At this late period of the discussion, I think it would be unreasonable were I to detain you more than two or three minutes in any observations I may make, but as a particular friend of Mr. James Haughton, who may be known to most here, and as an old medical practitioner of nearly fifty years' standing, I have had the opportunity of seeing a great deal of the frightful evil caused by alcohol—alcohol as prescribed by medical men. A gentleman has just mentioned the name of Dr. Todd. Dr. Todd was an Irishman, and a very able man, but I have been told by a gentleman who served him in the capacity of assistant, that Dr. Todd fell a victim to his own practice. Speaking personally, I must say that I am not a teetotaler. I was a teetotaler for a good many years, and very often, when I advocated the system, people would say, "Are you a teetotaler?" and when I replied in the affirmative, they would exclaim, "Oh! I do not value your opinion, because you are bound to give it one way, you can't help yourself." Therefore for a good many years I have not been a teetotaler, but I now no more think of taking wine or anything of the kind than I would think of taking senna or salts. Still, occasionally (I know that here I may be charged with weakness) I do take a little wine very carefully in a social way, and the less I take the better. There never was a greater mistake in medicine than to suppose that alcohol is necessary, or that it is the best stimulant that a doctor can order. I think a glass of cold water is a stimulant, and very often more so without alcohol than with it. I should feel it a dereliction of duty did I not raise my feeble voice in praise of the non-alcoholic treatment, but it would be idle to deny that we have the principle of alcohol in almost everything we take as nature gave it, but not as corrupted by distillation.

Dr. KEALY: This question of total abstinence has had very much attention from me. In the garrison town in which I live it is no uncommon thing to see a great many men, both soldiers and sailors, carried to the guard-house or to the police-station through drink. I have often gone into beerhouses of an evening, and witnessed the kind of doings in them. Still, there is a cause for everything, and I have come to the conclusion that one great means of promoting total abstinence—and, if not total abstinence, temperance—would be to have buildings or rooms offering as much comfort to those who frequent them as the taprooms of public-houses. I believe one cause of our working men and others going to the taproom is this—not so much for the love of drink, as the love of society, of a cheerful fire, and of a comfortable room in which to sit by way of contrast to their own homes, which perhaps consist of two or three rooms, filled with children, and a wife busy washing, the result to them being discomfort, and so they seek a more congenial sphere. If places could be erected or utilised where men could have tea, coffee, water, or lemonade, association, with a comfortable room and fire, I believe that that would be one of the most effective means that could be devised of curing drunkenness amongst the working classes.

Mr. JOHN J. RITCHIE, M.R.C.S., of Leek, Staffordshire: I rise to propose a vote of thanks to our hosts, and in doing so I would say that looking at this question from this point of view, that we are spending £110,000,000 each year for the purchase of these alcoholic drinks, and as the result we are getting increased poverty, increased crime, and increased death, and seeing also experiments have been positively made by earnest investigators, that we can live more healthily without alcoholic drinks, and that certificates from medical men have afterwards become the excuse of persons continuing to drink, I do think as medical men it is our bounden duty to be more careful in the prescription of these things than we have ever yet

been. It is so common to say, "Take a glass of wine," or something of that kind, without ever considering the amount of alcohol that may be in that wine or beer, because we all know it may differ very considerably, and we do not give other drugs in the same way. As a beverage I think it is mischievous, unquestionably, to the health of the body. Therefore I consider that we ought to be more careful in our prescription of these things, and put them in the category of drugs, and send them out of our own places and not send our patients to the publichouse. We have hitherto failed, I think, in our duty on that point, and we hardly come up to the standard to which medical practitioners ought to attain unless we take more notice of that which is undoubtedly the most prolific source of disease and death in this country. I beg in conclusion to propose the vote of thanks.

Dr. ROBERT MARTIN, of Manchester: I have very great pleasure in rising to second the proposition, and perhaps I may also take the opportunity of referring to one or two remarks which have been made in the course of the morning. The very natural inquiry in the present day is, What is the action of alcohol on the human system? This is a question which it is difficult to answer. There appears to be still a great deal of mystery as to the real effect of that article upon the blood and tissues. We know that any soluble substance introduced rapidly into the body produces an effect upon the system in proportion as it changes the condition of the parts with which it comes in contact. Alcohol is a diffusible stimulant, it may be said to be almost infinitely divisible. Whatever part of the body its molecules come in contact with it tends to deprive of their water, and therefore to harden. It acts thus as an unnatural substance—an intruder—and acts as a foreign body. It therefore produces a condition of the tissues different to that which previously existed. Wherever this takes place we have a chemical change, and wherever we have a chemical change we have an extrica-

tion of force, supposing that the effect produced is not too powerful, because we know that there are certain agents—prussic acid, &c.—which in considerable doses operate so violently as to extinguish further chemico-vital change. A moderate dose of alcohol being taken, a proportionate change in the nerve tissue is produced, and for the time there is an increased manifestation of force. Now we find that if the tissue is left in its normal condition, the production of nerve force proceeds; if in the change nutrition has been improved, if the normal elements of the tissues or cells have been proportionally increased, then there is increased power. But if they are adversely affected by the change, then there must necessarily be a declension in the amount of force extricated. Now this is what takes place when the molecules of alcohol come in contact with the albumen-tised elements of nerve tissue; the hardening process interferes with nutrition. There has been a sudden extraction of force, but nutrition and chemical change are adversely interfered with. There is, therefore, diminished nerve force; depression follows exhilaration. Hence the craving for a removal of the excitant. A case of typhus has been mentioned, however, where a large quantity of liquor was given each day without any apparent depression or injury being produced. There was no proof, however, that good was done thereby, or that some disadvantages were not caused. In typhus, the nervous system is under the influence of a more powerful enemy than the alcohol imbibed, but as typhus relaxes its hold the toxic results of alcohol become apparent. We know that owing to a mistaken diagnosis, considerable doses of opium have been given in this disease without apparent injury. I have never heard, however, any one hint that the patient was benefited by the opium thus administered. The question has arisen whether alcohol could be dispensed with in cases like that mentioned by Mr. Taylor. At present it perhaps could not, especially in cases of emergency. The important

point for consideration is whether, in the majority of cases, a substitute might not be found, for what must, in some of the cases in which it is employed, be a dangerous article. We know that timely manipulation, ergot, cold, or electricity, are far more effectual. In a case lately which came under my care, I was told that the patient in all her former labours had flooded terribly after labour, and of course brandy had been freely administered. By timely pressure, a very small quantity of ergot, and one application of cold, the tendency to flooding, which showed itself most remarkably, was completely checked, and instead of a long and tedious convalescence, the patient made a rapid recovery. Not a drop of brandy was given. I do not deny that under certain conditions alcohol is a most valuable medicine. So is opium, and as in special cases no substitute can be found for it—not even chloral will answer so well in some cases—so in very rare instances I believe that we have no substitute for alcohol. But because opium is sometimes invaluable as a medicine, is that any justification for its common use? Does any one advocate moderation as regards opium, or condemn as irrational those who abstain from it? But alcohol is as much a poison as is opium; it acts as insidiously, as seductively. The chairman, Mr. Olver, and the teetotalers, therefore, must be perfectly right when they ask us to be as careful in ordering the former as we are in prescribing the latter. I do certainly think that if we as a profession kept more fully in view the seductive and enslaving effect which alcohol too often exerts upon the human system, we should be much more careful in its employment than we are. Certainly, there is a very considerable amount of responsibility resting on us. Is there a more terrible curse in our country than that which arises from the common use of alcoholic liquors? Is there any class of men who see so clearly the awful results, the terrible misery, the disease, disgrace, and infamy, which it brings on individuals, on families, and on the country?

Why, sir, if we are silent, the very stones may rise up in judgment against us. Therefore I for one feel deeply obliged to the gentlemen who have brought us together this morning for the purpose of discussing so vitally important a subject. Apologising for detaining you so long, I very cordially second the vote of thanks which has been so ably proposed by Mr. Ritchie.

The Rev. G. W. OLVER rose to reply, and said: It would be very ungrateful on my part to detain the gentlemen any longer who have so kindly favoured us with their presence. I would, however, say, in acknowledging the vote of thanks, how very greatly encouraged we are by the universal expression of opinion on your part that it is not merely the privilege, but the imperative duty of the profession to guard with the greatest possible care the use of alcoholic stimulants even in the way of medicinal agents; and especially have I been encouraged by the general expression of opinion that it is right that the medical profession, when obliged to use such agents as these, should carefully see to it that their medical advice is not allowed to degenerate into an excuse for the habitual use. (Cheers.) In the remarks which I endeavoured to make to you at the beginning, I carefully guarded myself from entering upon the teetotal question, as a teetotal question, and confined myself for that very reason to such aspects of the subject as I thought appertained specially to the medical profession. I am much interested to find on both sides so very deliberate and distinct an assertion of the necessity—the absolute necessity—for the use of alcohol as a medicinal agent, and on the other side so very distinct an assertion that where a medical practitioner has the command of other agents in his surgery it is possible to do without it. No subject has more interested me—not this morning only, but before I came here, and for some time past—than the necessity or otherwise for the use of alcohol in cases of excessive hemorrhage, for I think that that class of cases is really a crucial test, and that if there be any

class of cases which necessitates the use of alcohol in must be such a class, and that if you, gentlemen, as a medical profession, can only arrive at some deliberate agreement as to the possibility of dealing with such a class of cases as that without the use of stimulants, then I think that the medical question will be once and for ever settled, except in such a case as Dr. Melsom mentioned, where a medical man has to draw upon all the reserves he has at hand. I am requested to thank you, on behalf of Mr. Sturge, for your attendance and careful con-

sideration of the matter laid before you. We shall earnestly trust in you that, throughout the country, as far as possible, you will help us thus far, that your patients shall never have the opportunity of pleading your medical advice for the habitual use of alcoholic drinks, which one speaker has called a "life restorer," and which another has told us acts as such a "life restorer" that the issue of it must eventually be death.

The proceedings then closed, the discussion having lasted about an hour and a half.

(From a Medical Correspondent.)

WHILST we express our deep gratitude to those of our professional brethren who accepted the National Temperance League's invitation, and who manifested so warm an interest in the subjects discussed at the meeting in question, we cannot let pass the present opportunity of comment without giving expression to a few of the thoughts which animated us at the time, and which have subsequently engaged our serious consideration.

The importance of the question of total abstinence, considered medically, was great enough to have occupied for days, or even weeks, the careful attention of the six hundred members of the British Medical Association who were present in Birmingham. And very scanty justice could be done to a subject of such vast magnitude in the two hours allotted to us. The time of the members seems to have been strictly upon the "limited" principle, for so many subjects were necessarily crowded together in such a short space of time, that we can hope for little more than that the subjects should have only been broached, to become the matter of subsequent study and experiment.

The opening address after breakfast at the Royal of the Rev. Mr. Olver was full of fine feeling, earnestness, and noble-minded philanthropy, and the sterling sentiment which fell from his lips could scarcely have failed to

evoke the better feelings and emotions of all who live and labour for those around them. The Christian Minister and the Physician, as he observed, have much in common; devoted to hallowed callings, in many ways their sympathies are united. They both devote their lives to the alleviation of the sins and the diseases of fallen humanity, and how far they shall succeed must in a great measure depend upon their innate earnestness and devotion. If they are true workers they will never fail to cast an influence of blessing and beneficence around them.

The testimony of nearly every speaker bore out the universally admitted confession of the appalling evils which are daily resulting to society from the mistaken practice of alcoholic imbibition; and this admission corresponds so exactly with that obtained from society generally, that it would have been vain to have contended for an opposite opinion. The meeting consisted of about one hundred and fifty medical men from all parts of the kingdom, interspersed with several distinguished foreigners, and considering the number of medical men we never remember to have arrived at such a corroborative *diagnosis*. It was the *treatment* of the disease which seemed to form the bone of contention, and, whilst much variance of individual opinion was

upon this matter freely expressed, much of the discussion drifted into collateral questions which had better, considering the limited time, have been waived. Several speakers, who only partially advocated total abstinence, seemed to us to take extreme views, whilst they lost sight of great principles. An eminent and respected physician seemed to have got the notion "that a person should be allowed to die rather than to have given to him an alcoholic stimulant." But how or where such a thought originated we are at a loss to ascertain—supposing that such a case really and truly presented itself; but after twenty years of extensive practice we think that such a case is more of a theoretical and imaginary occurrence than one often really met with. Cases of *post partum* hemorrhage were frequently referred to, and alcohol was spoken of as the "only remedy," although obstetric literature has pointed out many that are more potent. The stoppage of the leaking source of the life's stream seems to us to be a more philosophical proceeding in such cases than that of goading the heart and arterial system by a stimulant which is confessedly exhausting. But an eminent authority has only lately declared that brandy is "the worst remedy in such cases."

We are convinced that a very large percentage of these cases will do well and recover by a judicious use of those other resources which must suggest themselves to every educated obstetric practitioner. For many years it has been our study and aim to reduce the medical prescription of alcohol to the very lowest point, and we find in obstetrics, as in other spheres of life, the old proverb holds good—"Where there is a will there is a way." The safety, welfare, and recovery of our patients we scrupulously observe; and yet we can with truth affirm that we never lose such cases, whilst we scarcely ever employ alcohol in any form.

We are inclined to regard this outcry about "patients dying for want of alcohol" as being to a great extent imaginary—happening more fre-

quently in theory than in actual practice. But even admitting the very occasional necessity for the employment of alcoholics in such and similar cases, a rare and far-fetched case cannot for one moment be set up against the endless evils which are being done to society by the prescription of alcohol, not only in these cases of *post partum* hemorrhage, but in thousands of others which daily come under the notice of every practitioner, in which there is not the shadow of a scientific basis for the employment of alcohol. As long as any ground is admitted for the employment of alcohol, so long will its use be open to abuse. The great evil to society results from the medical prescription of this agent in nearly every case of chronic or acute illness as a medicine without scientific object, or as a dietetic in which it is equally employed without a philosophical reason. The subject of the medicinal use of alcohol is one of vast importance, involving the health and the lives of millions of human beings. It must be studied from a lofty standpoint, where we can expect to gain nothing by argument from rare and isolated cases.

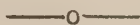
The subject is worthy of a life's study, and whilst we would approach it with a full consciousness of the responsibility which falls upon all of us as medical practitioners, we would bring our highest and noblest feelings to bear upon the inquiry. We should see the subject not only as physicians, but as Christians and philosophers, fully aware that our duty is to do the greatest good to the greatest number of our kind. The accomplished physician should be a philanthropist, decked with mental and moral jewels, and ever remember the words of Hufeland—

"Thine is a high and holy office, see that thou exercise it rightly, not for thine own honour, or glory, or profit, but for the good of God, and the welfare of thy fellow-men. Hereafter thou wilt have to give an account of it."

Upon such a lofty standpoint alone can we with advantage to ourselves or to the people take up the question

of alcoholic drink. The general public affirm that the uses of alcohol in the body are the special business of the Medical profession, nor can we controvert the assertion; and justice

demands that we should require at the hands of that profession a just and true estimate of its value, and that that estimate shall in no way exceed its true worth.



#### DR. E. A. PARKES ON THE EFFECTS OF ALCOHOL AND EXERCISE ON THE BODY.

IN the proceedings of the Royal Society (Nos. 120 and 123) there are some observations by the late Count Wollowicz and Dr. Parkes on the effect of alcohol, brandy, and claret, on the elimination of nitrogen. As the subject is one of physiological interest we are glad to find that Dr. Parkes has presented the Royal Society with a paper containing the particulars of some experiments tried, in March last, on another man, and as in these experiments the action of alcohol is included we shall give a condensed account of these researches. The object of the experiments was to ascertain how far exercise caused an increased elimination of nitrogen, whether this was affected by the use of alcohol, and if exercise caused an increased elimination, whether the nitrogen was derived from the food or from the disintegration of the tissues of the body. The man selected as the subject for these experiments was a steady temperate soldier, aged thirty, five feet six inches high, forty inches round the chest, and in good health. As the man was a Scotchman, it was decided that he should live on oatmeal, and water, and milk. After some preliminary inquiries it was found that he required twenty-eight ounces of oatmeal and two pints of good milk per day, and on this diet he subsisted and maintained his health for sixteen days. The advantage of this simple fare over a more mixed diet was that it rendered it more easy to ascertain exactly how much nitrogen was contained in his

daily allowance of food, which was a point of great importance in reference to the elimination of nitrogen. The water he took daily, including that in the milk, amounted to 135 fluid ounces. And with no other food or drink, except the brandy he took for experiment, he remained perfectly well and vigorous. The oatmeal and the milk and the brandy were carefully analysed, and every precaution was taken against error. The course of the experiments was as follows:—The man was allowed six days' rest, only walking enough to keep him in health. For three days he then worked hard at digging, from eight to nine hours daily. He worked as hard as he could, making the labour as uniform as possible each day. He was then kept at rest for three days. And then he worked at digging for three days, but during these latter three days he took twelve fluid ounces of brandy (containing 5·4 fluid ounces of absolute alcohol) daily, in three doses of four ounces each, at ten, two, and six o'clock. After this he rested for three days. On all these days the condition of the man during the periods of rest and exercise was carefully ascertained. He was accurately weighed every morning. The excretions were analysed daily, and the exact amount of the nitrogen recorded. The pulse was taken every two hours after the man had been in a recumbent position for fifteen minutes. The temperature of the body was taken nine times daily, at intervals of two hours. The elimination of the alcohol was also

tested and the effect of the brandy on the man's power to labour. Dr. Parkes's paper gives the results of these experiments in a series of elaborate tables, to which those of our readers who are interested in physiological researches may refer. There are, however, some points in reference to the action of the alcohol of interest to the friends of temperance. Thus it was found, as in former experiments, that the effect of the brandy was to derange the action of the heart by causing it to do an unnecessary amount of work. The brandy, in the case of this man, caused a daily increase of 6,552 pulsations of the heart over the exercise period with water. Now, as the man was in perfect health during the water period, his heart properly performed its office. When we look at the influence of alcohol upon the working of the heart, can we believe that this derangement of function is necessary or beneficial? The experiments in reference to the elimination of alcohol were only *qualitative*; they showed, however, that before the brandy was given to the man nothing passed off by the skin, the lungs, or the kidneys, which had the slightest reducing effect on the bichromate of potassium test; while, after the brandy, a substance which at once reduced the test passed off by all these channels, especially by the skin. It is to be regretted that none of our investigators in this country have taken the trouble to ascertain how much alcohol is eliminated through the skin. We are fully aware of the difficulty of doing this, but it is absurd for Dr. Anstie and Dr. Dupré to pretend to settle the quantity of alcohol passing off from the body until they learn how much is eliminated through the skin. Of course a knowledge of the amount of alcohol passing off from the body will not solve the problems relating to its action. It appears that, when the man began to take the brandy, he thought it would give him a kind of spirit to do a great deal of work, but he found he was deceived. And when he took the second and third doses there were marked narcotic effects—he felt heavy and could hardly refrain from giving

up work. The man's judgment at the end of the experiments was that he could do the work better without the brandy. This accords with the opinion of all who have fairly tried the effects of abstinence. Whatever alcohol may do, it cannot give strength, and severe toil can be better borne without its treacherous aid. The following are Dr. Parkes's "Conclusions":—

1. The elimination of nitrogen during exercise was unaffected by brandy, and since the experiments led to the same result in the former series during comparative rest, it seems certain that, in healthy men on uniform good diet, alcohol does not interfere with the disintegration of nitrogenous tissues.

2. The heat of the body, as judged of by the axilla and rectum temperatures, was unaffected by the amount given.

3. The pulse was increased in frequency by four ounces of brandy, and palpitation and breathlessness were brought on by larger doses, to such an extent as to greatly lessen the amount of work the man could do, and to render quick movements impossible. As the effect of labour alone is to augment the strength and frequency of the heart's action, it would appear obviously improper to act on the heart still more by alcohol. In this effect on the heart, and through it on the lungs, is perhaps to be found the explanation of the trainer's rule, which prohibits alcohol during exertion. Whether in a heart exhausted by exertion alcohol would be good or bad is not shown by these experiments; but it can hardly be supposed that to urge a heart which requires rest, as would then be the case, can be proper.

4. It seems clear, from the suddenness with which marked narcotic symptoms came on after the third dose was taken on each day, that the eight hours from ten to six o'clock were not sufficient to get rid of the brandy taken at ten and at two, and that in fact the body must have been still saturated at six o'clock.

The exact amount of brandy which commenced to lessen the labour the

man could perform is not shown by these observations, and would require more careful modes of investigation. It was evidently some quantity more than four ounces which produced effects sufficiently marked to attract his attention, but I should not wish to affirm that even four ounces produced no effect in this direction. The man himself was of opinion that four ounces had no influence either way. He was quite certain it did not aid his work, but he could not see that it injured it. The second four ounces decidedly produced a bad effect.

5. Neither exercise on water or on alcohol produced any effect on the phosphoric acid of the urine. The result is in accordance with that of the experiments recorded in No. 89 of the "Proceedings of the Royal Society."

The effect on the free acidity of the urine was inconsiderable. The free acidity may have been a little in-

creased in the brandy period, but the change was slight.

The effect on the chlorine was not certain, as its ingress was not sufficiently constant, but it seems to be lessened in the exercise period.

As the action of alcohol in dietetic doses on the elimination of nitrogen and on the bodily temperature is so entirely negative, it seems reasonable to doubt if alcohol can have the depressing effect on the excretion of pulmonary carbon, which is commonly attributed to it. It can hardly depress, one would think, the metamorphosis of tissues, or substances furnishing carbon without affecting either the changes of the nitrogenous structures or bodily heat. It seems most important that fresh experiments should be made with respect to its effect on carbon elimination, as without a perfect knowledge on that point the use of alcohol as an article of diet in health cannot be fairly discussed.



## THE CAUSES OF INTEMPERANCE.

(From the *Lancet*, Aug. 31.)

WHATEVER may be thought of Mr. Dalrymple's proposal to establish reformatories for drunkards by legislative enactment, and whatever may be thought about the precise provisions of the Licensing Act, there can be no doubt that there is a general agreement with regard to the evils of intemperance, and a general desire for their repression, coupled with an uneasy suspicion that the habits which lead to them are very widely diffused abroad among society. We shall not be accused of leaning towards the doctrines and practices of the total abstinence party; and we are fully convinced of the great dietetic and medicinal virtues of alcohol. But we do not yet yield to Mr. Bowly himself in our clear perception of the injury done by excess, however we may differ from him as to the means by which excess might be prevented. In some cases, no doubt,

people inherit from deceased ancestry a volition so feeble that they can scarcely be expected to resist any form of temptation, and, if they like drink, they become drunkards out of hand. Putting this class on one side, we cannot accept the existence of drunkenness as an ultimate fact of human nature, but think it must be due to causes some of which investigation might disclose. Abstainers have long endeavoured to trace it to our social customs, and George Cruikshank has crystallised the endeavour in one of his well-known pictures. But surely this is, in the main, an error; and, except in the lowest classes, conviviality and intoxication do not go hand in hand. More wine is consumed at dinner parties than at any other like occasion; but nobody nowadays drinks too much at a dinner party, and it is a matter of common observation that even free after-dinner

drinkers have little or no tendency to become drunkards. We incline to think that the chief source of drunkenness arising from accepted customs would be the practice of taking "nips" at odd hours of the day; and there are many reasons why this practice is on the increase. Our mercantile classes are leading lives of strain and excitement to which history furnishes no parallel, and they do so mainly on account of the increased facilities of communication with correspondents in distant places. People still living can remember when the events of the day turned very much upon the letters brought by the morning post delivery; so that, as a rule, when these letters were read, the man of business knew what the day had in store for him. Now, the place of letters is largely taken by telegrams, and telegrams meet one at every turn, coming without warning and at no appointed time. Often, of course, they must bring bad news, and thus those who habitually receive them are called upon to stand with their loins always girded. A man who is just about to enter upon a negotiation requiring all his knowledge and acuteness receives a telegram which informs him of loss or misfortune. A glass, or more than a glass, of wine will enable him to rally his faculties, to prevent them from travelling instinctively to the bad news, and to keep them concentrated upon the matter in hand. Thus it befalls that so many offices have cupboards in which sherry-and-bitters may be found; and the habit of using a stimulus as a spur to the overtaxed or jaded faculties is one that grows apace. Among women in the middle classes very analogous conditions exist. They are, in many cases, reared in habits of luxury and idleness, with little or no real mental culture. They have no sympathy with, or knowledge of, the occupations of their husbands, who are often hard-workers in commercial or professional pursuits. They have not the wide range of social duties which renders the life of a great lady nearly as arduous as that of a statesman or a general; but they are apt to think

that they approach to being great ladies when they hand over their children to nurses and governesses, and their establishments to housekeepers. A life of idleness and vacuity is attended by many sources of discomfort; physical discomfort, due to gastric or uterine irritation; mental discomfort, due to triumphs of rivals in a little circle, to the superiority of Mrs. Brown's carriage, or to the extravagance of Mrs. Robinson's costume. For such distresses, alcohol is for a time an unfailing sedative; and eau-de-cologne is apt to be replaced by brandy. The lady feels a little "low," and must have something to support her. From causes and under conditions which the foregoing examples may illustrate, but do not exhaust, it is brought about that people in a respectable position drink little drams at all sorts of periods in the day. They do not get drunk—at all events not in the early stages of their progress; but the "nips" destroy the already weakened self-control, and lead to drunkenness. The less the excuse for occasional stimulant, the greater mischief is it likely to do; for alcohol, when it is needed to sustain the nervous system against an actual shock, may perhaps be expended in fulfilling the purpose for which it is consumed. When, on the contrary, it is not taken to call forth effort, but only to afford ease, it will do its full measure of mischief to the nervous and the secretory systems.

We would urge, therefore, upon all who would promote temperance, and especially upon medical men who are consulted with regard to habits of life, that they should do all in their power for the suppression of the occasional stimulant, which is taken between meals, and which is not called upon to go out in action. Our American cousins are far ahead of us in the matter of asylums for inebriates; and it is fair to assume that they are ahead of us as regards the inebriates themselves. If this be so, it would confirm our belief that habitual drunkenness is only an advanced form of frequent "liquoring up."

## STATISTICS OF TEMPERANCE LONGEVITY.

IN the Health Section of the Social Science Congress, at Plymouth, on Tuesday, 17th September, a paper was read by Edward Vivian, Esq., of Torquay, from which we give the following extracts :—

“When total abstainers from alcohol urge the importance, on social and moral grounds, of avoiding the principal cause of pauperism and crime, and the drain of £100,000,000 upon the national resources, which may be devoted to the amelioration of the condition of the industrial classes, they are naturally met with the reply that this can only be effected by the surrender of an article of diet, which, if taken in moderation, tends to raise the general standard of health and strength. From the following statistics, I think I shall be able to show that these impressions are, in great measure, if not wholly, unfounded; that, as a general rule, alcohol, or any other stimulant, is not only unnecessary, but positively injurious, to persons in health, and that the chemists’ phial and not the decanter is its proper place. In deducing a law on a subject of such varied experience as this, it is indispensable that there should be a broad basis of fact, both in regard to time and numbers. The experience of the United Kingdom Temperance and General Provident Association, which

was founded in 1840, and of which I have been from almost the commencement one of the directors, affords the most trustworthy evidence which has as yet been accumulated, having been in existence more than thirty years, with a steadily increasing body of insurers which now amounts to 40,000, divided into two sections under precisely the same management, rates of premium, and tests on admission, with the single exception that one is confined to total abstainers from alcohol and the other open to the general public, the funds in each section being kept distinct. During the first five quinquennial periods I shall only be able to refer to the pecuniary results, and these are of course open to a doubt whether the difference has not arisen from policies of comparatively greater value having become payable in the general section.\* In order to test this, although the uniform character of the results renders it highly improbable, the full investigation of the vital as distinguished from the pecuniary statistics, and the expected as well as actual mortality at different periods of life, was entrusted to Mr. Brown, an eminent actuary wholly unconnected with the temperance movement, who has furnished the following returns for the five years ending in December, 1870 :—

## TOTAL ABSTINENCE SECTION.

Year.	Expected Claims.	Actual Claims.
1866 .....	100 for £18,014 .....	85 for £15,420
1867 .....	105 „ 18,936 .....	71 „ 8,830
1868 .....	109 „ 20,024 .....	95 „ 16,526
1869 .....	115 „ 21,136 .....	73 „ 16,505
1870 .....	120 „ 22,336 .....	87 „ 15,395
Totals	549 £100,446	411 £72,676

## GENERAL SECTION.

Year.	Expected Claims.	Actual Claims.
1866 .....	180 for £34,732 .....	186 for £39,129
1867 .....	191 „ 37,003 .....	169 „ 32,200
1868 .....	202 „ 39,515 .....	179 „ 51,055
1869 .....	212 „ 41,583 .....	201 „ 50,320
1870 .....	223 „ 43,519 .....	209 „ 57,593
Totals	1,008 £196,352	944 £230,297

From these figures it appears that the mortality among 'total abstainers,' insured in our office during the last five years, was 26 per cent. below the averages upon which the tables are calculated, whilst in the 'general sec-

tion,' which is open to the public, it was only 7 per cent. less.

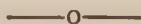
"The pecuniary results during previous quinquennial periods, as shown by the reversionary bonus declared on the premiums, had been as follows:—

Year.		Section.		Per cent.	Mean per cent.
1860	.....	Total abstinence	.....	35 to 86	60
"	.....	General ... ..	.....	25 to 57	41
1865	.....	Total abstinence	.....	23 to 56	39
"	.....	General ... ..	.....	17 to 42	29
1870	.....	Total abstinence	.....	34 to 84	59
"	.....	General ... ..	.....	20 to 49	34

The general average as shown in this table is 53 per cent. returnable from the amount of premiums paid in the Total Abstinence Section, and 34 in the General; an advantage of nearly one-third in favour of teetotalism, as compared with moderate drinking. The great majority of those who become members even of the General Section are favourably disposed to temperance, and many, practically, abstainers."

In corroboration of these returns, Mr. Vivian read extracts from Mr. Nelson's last unpublished paper before the Statistical Society, showing that innkeepers and publicans, with their male servants, die at a rate far exceeding that in any other occupation. Their annual mortality is 25

out of every 1,000 living, whilst the average is only 16·2 amongst the general population. Comparing this with the experience of the Temperance Provident Association, he showed that nearly two deaths out three amongst publicans as compared with total abstainers, were attributable to their vocation, and constant tippling, generally short of intoxication. The statistics of the Whittington Insurance Company and the Cornwall and Devon Friendly Society would also show similar results. In regard to the latter, Mr. Brown, the actuary, remarks, in last year's report, upon the "unusually favourable results," which he attributes to "the members being all teetotalers."



## CONTROL OF INEBRIATES.

LETTER FROM DR. ROBERT DRUITT.

(To the Editor of the *Medical Times and Gazette*.)

SIR,—It is very easy to laugh aside anything, however important and useful, if it can be made to appear to conflict with our popular English idea of "liberty." Hence we have seen that an influential paper derides the conclusions arrived at by that Select Committee of the House of Commons which was presided over by Mr. Dalrymple, and which investigated and has reported on "The Best Plan for the Control and Management of

Habitual Drunkards." It is very easy to say that any person, however sober, prudent, and respectable, who happens to be dining at a tavern, and to take a glass too much, may be dragged before a magistrate and heavily fined; and that all old English conviviality will cease, all family harmony be destroyed, and husbands and wives be found informing against each other, if ever they take a pint of beer too much.

All this nonsense may be dismissed; and we may fix our attention on two crying and palpable grievances which afflict society, and which the law may be made to reach without trenching on liberty or interfering with our amusements, our follies, or even our peccadilloes.

The first is the frequency with which offences against decency and order are committed in public by persons under the influence of drink. It is fair to say, Let people drink as much as they like in private—there need be no punishment for that; but, on the other hand, there ought to be a really deterrent punishment against public offences which drunken persons commit. A man who exhibits himself in a tipsy condition, unable to take care of himself, and therefore occupying the time and attention of the guardians of the public peace—a man who fights, or who assaults women, or who annoys fellow-passengers in a railway carriage—ought to be visited with a punishment which should render him cautious about committing a second offence. But these are matters for the police, not for the physician.

Members of our profession have a sadder and a higher task in combating the passion for secret drink which afflicts persons who never come in the way of the police, “or are dealt with by the authorities” (as the report of the Committee says), “but which is probably even a more fertile source of misery, poverty, and degradation than that which comes before the police court; for this no legal remedy exists, and without further legislation it must go on unchecked.”

Such are the cases in which, if I may paint from the life, some young, imaginative, romantic girl, of feeble body and excited brain, gets married. The “living happy ever after” is found to be a delusion. Children come quickly; perhaps exhausting miscarriages; the husband may be cross or poor; his family may grumble at the “delicate” wife; she, poor thing! exhausted, bloodless, and spiritless, may bravely try to do her duty in the family, and for this purpose listens to the insidious advice, “Why not take a glass

of port wine at eleven o'clock?” or, peradventure, a little glass of gin. Thus a little spurt is got up; but the appetite is bad, and the food coarse; it is easier to drink than to eat; and so, step by step, the poor victim is led on, till at last the hideous discovery is made some day by the astonished husband that his wife “drinks.” Then there is a row, a family council, great fits of crying, and promises of amendment. Possibly these may last; possibly not. Then, after a deceitful calm, fresh discoveries are made: the tradesmen’s bills are found unpaid; bills come in for brandy; articles of plate or jewellery are pawned; the children’s dresses are scanty, and their food curtailed; and, worse than all, a drinking mother is a source of demoralisation to her whole surroundings. The children are sent out for drink, and taught to lie about it; the servants rob, and misconduct themselves, because their mistress is afraid of them; and the tradesmen cheat and screw up their charges, because their money is in arrears.

Now, let the unhappy husband try to mend this state of things. He consults his parson, but (for reasons I should not like to state in a medical journal) ordinary religious teaching is useless or mischievous. The lawyer proposes a “deed of separation,” which would only be letting the poor creature go to the deuce unchecked. The physician, on the other hand, says, “Let me treat the patient, and I’ll cure her. Such and such a cause of exhaustion can be suppressed; palatable and nutritious food be insisted on; tonics and harmless stimulants be substituted for alcohol; rest, care, and tenderness will accomplish the rest.” But then comes this difficulty; the patient will not submit to treatment—she will drink on—and there is no power to stop her, unless legislators will stoop to matters of fact, and support the recommendations (or some of them) of Mr. Dalrymple’s Select Committee.

I am, &c.

R. DRUITT.

London, July 2nd, 1872.

## Notes and Extracts.

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ON GIVING ALCOHOL TO YOUNG PERSONS.—My conclusions as regards giving alcohol to the young are in the main not at variance with the opinions of those who advocate extreme temperance. My own experience leads me to believe that the majority of young healthy people would do well without alcohol; and I believe the habitual daily consumption by young persons—even of a moderate quantity—of wine or beer, is quite unnecessary, and mere waste, while in some instances it is positively injurious to health.—*Dr. L. S. Beale, F.R.S.*

MEDICAL EXPERIENCE.—Up to the age of forty very little stimulant is, as a general rule, really desirable for healthy persons, and I expect most people of average health would get on better without any. My own personal experience is this:—I was never very strong, though always able to get through a very considerable amount of physical exertion without suffering from fatigue. Up to the age of forty I hardly ever touched stimulants of any kind, and when I did take a little I not unfrequently experienced an attack of sick headache before my ordinary condition of health was restored. Lately, however, I have found the advantage of half a tumbler of ale daily; and I can bear half an ounce, and sometimes three or four ounces, of wine without suffering.—*Dr. L. S. Beale, F.R.S.*

SIR JAMES SIMPSON'S ADVICE TO NURSING MOTHERS.—Dr. William Menzies, of Edinburgh, a physician of thirty-eight years' experience, presided at a recent meeting of the Scottish Temperance League, and related the following anecdote:—A few days ago a lady who was nursing said to me, "Doctor, I am not very strong, don't you think I would be the better of a little porter?" I said, "There is no accounting for taste; but I would

prefer clean water to dirty water any day. Do you know what Sir James Simpson said to me on the subject? He said, 'I have ordered wine, porter and ale to those who are nursing, but I will never do so again, for I believe that such drinks damage the mother and injure the child, and those who cannot or will not nurse without such drinks should not nurse at all.'" "Did Sir James Simpson really say that?" said the lady. "Yes," said I. I never heard any more about prescribing porter from the lady.

A COLONIAL "INEBRIATES' RETREAT."—At Melbourne a committee of gentlemen are advertising for premises capable of being used as an institution for the treatment of habitual drunkards. They wish to obtain them within ten miles of Melbourne. A sum of £860 has been collected, and sums are still coming in towards the end contemplated. The draft of a bill has been prepared for submission to the Victoria Parliament, so as to enable the Retreat to be endowed with full powers to deal with habitual drunkards. The provisions of the bill are based upon the American laws now in force, the present Colonial Lunacy Act, and from suggestions given by medical men in Melbourne who are interested in the movement. When Parliament meets an application will be made for a sum to be placed on the estimates for the purpose of building an edifice in all respects fitted for the purposes the promoters of the Retreat have in view.

TREATMENT OF TONSILLITIS.—In a review of the third volume of Dr. Russell Reynolds's "System of Medicine," the *Lancet* says:—"Mr. Squarey's articles are for the most part short and sensible, but he is a little too fond of calomel in diseases of the mouth and throat, and there is a certain dogmatic looseness, to speak

paradoxically, in his therapeutics. For example, in common sore-throat, we are told that '*in all cases* the treatment should be commenced with a dose of calomel at night, and followed next morning by the common black draught and some saline aperient.' In common tonsillitis, again, we are told that *in all cases* the treatment should be commenced with free purgation, such as by a dose of calomel; and after the acute symptoms have passed, quinine and iron and *plenty of port wine* should be given. We believe that common sore-throat can be treated very advantageously, without either calomel purging at the beginning or 'plenty of port wine' at the end, with warm-water gargling, suitable nourishment, and plenty of chlorate of potash."

**FRENCH PRIZE ESSAYS CONCERNING ALCOHOL.**—The French Association against the abuse of alcoholic drinks has decided on the subjects for the prizes which it proposes to award in 1873-74. The following is the programme:—1. A prize of 500 francs will be awarded to the author of a work, in the form of either a novel, a tale, or illustrated sentences or publications, capable of being put into the hands of persons of every age, and of both sexes, which shall give the most impressive picture of the dangers of drunkenness. 2. A prize of 500 francs will also be given for researches on the practical means of substituting for the use of alcoholic liquors, in the ordinary habits of the people, the employment of beverages which are not only harmless, but even salutary, such as tea and coffee. 3. The third subject proposed is the determination, by the aid of chemical analysis, clinical observation and experiment, of the analogies and differences, which, under the double relation of their composition and their effects on the organism, exist between the spirit of wine and alcohols of every kind in commerce as drinks or as liquors. The prize for this will be 1,500 francs. The two orders of very distinct facts which this third question embraces may be treated separately. The essays on the first two questions must be addressed,

not later than March 31st, 1873, to the general secretary, Dr. L. Lunier, 62, Rue Jacob, Paris; that on the last question not later than December 31st of the same year.—*British Medical Journal*.

**STIMULANTS DURING HEMORRHAGE.**—In a clinical lecture by Dr. Cooper Forster, Surgeon to Guy's Hospital, published in the *Lancet* (June 29), he says:—"Cases of hemorrhage require very careful management with regard to stimulants. On the one hand you have to guard against fatal collapse, and on the other against any excess of circulatory activity when reaction is established. I was not sure in this case whether the brandy might not possibly increase the hemorrhage, and therefore I did not continue it. Be careful in these cases. In all abdominal injuries with rupture, however slight, of any of the viscera, there is always much collapse. The public are very fond of pouring in the alcohol, and it certainly rallies the patient; but with the reaction comes also a quickened and excited blood-current, forcing out any clot which may have become lodged during the time of the feeble or nearly stagnant flow, and ensuring a fatal termination, whereas perhaps if the case had been left quietly alone, the rent might have become consolidated, and a valuable life saved. Do not yield to the public in their ever-ready advice in the way of stimulants, but let any case where you fear ruptured viscera lie quiet and collapsed if need be. Do you nothing more than to guard against the tendency to death, avoiding stimulants except as a last resource."

**ACTION OF ALCOHOL.**—No one has yet been able to give any satisfactory explanation of the fact that a little wine will occasion in some stomachs the greatest disturbance. Within a few minutes, not only is the process of digestion stopped, but there is pain, an unpleasant feeling of nausea, not unfrequently accompanied by an actual desire to vomit. In other persons a glass of wine will occasion no inconvenience at the time, but may lead, in the course of from twelve to twenty-

four hours, to the development of that unpleasant collection of symptoms which constitutes what is often termed a "bilious attack." Vomiting, purgation, and free diuresis afford relief; but sometimes the disturbance lasts for days, and is not allayed until the stomach has had twenty-four hours' complete rest from work, or until free action of the alimentary canal and all the glands that pour their secretions into it has been promoted by a dose of mercury. It is, after all, not improbable that this most unpleasant action of alcohol indicates a highly sensitive but not unhealthy action of the nerves of the stomach, and that tolerance of wine and spirits is due to a change which has been induced in the finest nerve fibres—in consequence of which their sensitiveness has been impaired. The tolerance of opium, tobacco, and some other poisons is probably to be explained in the same manner. Nor is tissue change limited to the nerves of the stomach; for it is an unquestionable fact that many of those persons who habitually subject their tissues to the influence of alcohol and tobacco, or both, at an early age, exhibit very distinctly signs of change in many tissues of the body. They look older; and, indeed, physiologically speaking, their tissues are considerably older, and have deteriorated in a much greater degree, than would have been the case if they had not been exposed to the action of alcohol.—*Dr. L. S. Beale, F.R.S.*

**ALCOHOLIC LIQUORS IN WORKHOUSES.**—We understand that the official return relating to the consumption of intoxicating liquors in the workhouses of England and Wales, recently moved for by Sir Harcourt Johnstone in the House of Commons, is in a forward state, and will shortly be issued. The subject is exciting increased interest in all parts of the country. The Islington Guardians have decided that, in future, no beer will be supplied to paupers in the workhouse, except as a medicine in cases of disease or infirmity. The result is that seven men and six women will now receive only half-a-pint of beer per day instead of

a pint, while the allowance of half-a-pint to eleven men and forty-six women will be wholly discontinued. The daily consumption of beer in the workhouse will consequently be reduced by seventeen quarts, effecting a saving of 4s. 4½d. At a meeting of the Brentford Board of Guardians on Wednesday, 28th August, a statement was made respecting the consumption of spirituous and malt liquors. Mr. Geisler, one of the members of the board, said he had been looking over their accounts respecting the consumption of wine and spirits, and he found that in five quarters the bill for spirits amounted to £453. In one quarter the cost was £91, and in another as much as £108. This, he considered, was far too large an amount, and he thought a committee should be appointed to investigate the matter. The chairman (Mr. Ashby) said it was quite certain, from his knowledge of the subject, that the consumption of wine and spirits in the Brentford Union Workhouse was frightful. The rate of consumption per head upon the number of paupers in this house was thirteen times greater than at Birmingham, the last bill for spirits amounting in the year to upwards of £760. Over 80,000 pints of beer were consumed in one year, about 900 pints of wine, and 900 pints of spirits, whereas there were only on an average between fifty and sixty inmates in the house to be served with these stimulants. Mr. H. S. Barnes said the responsibility for the use of most of this liquor rested with the medical officers, and was beyond the power of the guardians. Mr. Carpenter said in some unions a stop had been put to this wholesale consumption of liquor by putting into it, before it was served out, a chemical which rendered it unpalatable, and the result was that it did not get drunk by any but those to whom it was served as a medicine. This he considered was a rather dangerous plan, but it had answered admirably in reducing the consumption. A committee was then formed to investigate the matter, and to bring up a report with the cost per year during the last seven years.

THE  
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Original Contributions.

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THE CAUSES OF DEATH.

THE Thirty-third Annual Report of the Registrar-General, giving the returns for the year 1870, has just been published. The *Temperance Record* observes, and with much truth, that these reports are among the most melancholy, and at the same time the most instructive, contributions to our knowledge of social statics. To the general reader the long array of tables, extending over nearly four hundred pages, appear as uninviting and uninteresting as tables of logarithms must do to those who know nothing of arithmetic beyond its first four rules; but to those who are accustomed to go to the root of an inquiry, such statistical details, when carefully collected and arranged, do much to explain those social phenomena which, without such aid, are apt to confuse and perplex the mind. It is only within the present century that any scientific effort has been attempted to classify facts bearing upon the public health and mortality; but such information is essential as a guide to the statesman who seeks by legislative measures to improve the condition of the people, and they are equally important to the reformer who has the same high purpose in view. In a former age, and at times not very remote, when various forms of plague made ravages among the population—such as the black death, the sweating sickness, gaol and ship fever, scurvy, and ague, there were scarcely any data to direct the medical student, and popular superstition looked upon them as visitations of Providence with which it was unavailing to contend. A great advance has been made in public opinion, as the enlightened Christian, while fully recognising the Divine hand, regards these dispensations as the inevitable punish-

ment of transgression, and he does not expect that miracles will be interposed to save men from the consequences of their own sins and errors. He feels called upon to employ proper means, and seeks a blessing upon those means, which is never withheld if those means are wisely devised. Many of the old forms of plagues have disappeared before the steps of sanitary science, but they are succeeded by new kinds of disease, not so virulent or so speedy in the work of destruction, but continuously in operation, cutting off large numbers of the population. They leave behind them as much sorrow and suffering. For this generation there is no excuse, as we have now learnt that heavy sickness and mortality are due to preventible causes, and it is the duty of prudent men to ascertain and apply the appropriate remedy. In the Appendices to the present Registrar-General's Report, a letter from Dr. Farr is inserted on the Causes of Death, and, as it contains much important matter, we adopt it as the text of our article.

Before we enter upon it we must take a glance at some of the items of the report. The deaths in 1870 were 515,329, and 211,694—that is, 41·1 per cent. of the deaths were of children under five years of age. At the ages from five to fifteen the deaths were 33,890, so that taking this as the basis, and not stopping to enter upon minute calculations, it will be seen that above one-half of the deaths are of persons under the age of twenty, and the returns show that a comparatively small proportion of those born attain middle age. An excessive mortality represents a large amount of sickness, and it would be impossible to estimate what numbers of those who survive are afflicted with congenital debility, and who, from that cause, unable to maintain a struggle for subsistence, sink into paupers, mendicants, or criminals. Take them as we may, the figures are a standing reproach to our civilisation. As we glance down the table No. 9 we are startled by some of the figures. There are 16,593 deaths by violence, and these are made up mainly of 14,393 by accident or negligence, 381 cases of homicide, 1,504 cases of suicide, 258 violent deaths not classed. Then there are 3,180 sudden deaths from causes not ascertained, and 4,228 deaths from causes not specified. Taking these figures alone, what a mass of untold misery lies behind them, an amount unequalled except by such as may be supposed to follow the active operations of war; but war has its long intervals of cessation, while the violent deaths thus recorded are taking place year by year, month by month, and day by day—this fearful battle is always going on against our people, leaving its thousands and tens of thousands of slain.

When the returns are taken, as a whole, there is not much ground for congratulation. The diseases which are said to be the off-

spring of malaria have not diminished in a proportion that might have been expected, from the extent and nature of our sanitary improvements. What has been done in this way is small to the amount of that which requires to be effected; yet a heavy weight of local taxation has been laid upon the ratepayers to carry out measures of drainage and water supply, and the works already accomplished ought to have been attended with better results as affecting the Bills of Mortality. No doubt much labour, skill and money, have been wasted upon immature schemes, and imperfect plans; but still very important improvements have been carried out, and, if the expectations of sanitary reformers had been well founded and had been realised in a reasonable degree, there ought to have been a greatly diminished death-rate. Is it not possible that there are causes of sickness and mortality at work which the sanitary reformer has omitted to take into account? After all the exertions made in the last thirty-five years to carry out sanitary measures, many of which are efficient, we have the following passage in the present Registrar-General's Report. It appears to us a practical confession that the writer feels there are undiscovered influences at work which neutralise to a large extent the labours of Boards of Health:—

“How difficult it is to quench the pestilences that afflict mankind is evident from a retrospect of the English returns, now extending over thirty-three years. Disease is no sooner extinguished in one form than it breaks out in another; and the increase of industry, by which the means of living are created, itself develops new dangers in the mine, in the machine, on the rail, in the close workshop, and in the crowded city. Still there is progress; but health, like land won from the sea, is perpetually assailed by the waves of disease, so every new acquisition by nations widens the portion to be defended; and the ruin of one by pestilence may become, by extension, the ruin of all.”

We have pondered over this passage with the desire to reach its full meaning, and are of opinion that it fails to explain what it seeks to explain, and that it is not more successful in pointing out the desired acquisition that is to defend and protect all others. If new dangers to health and life have arisen in consequence of a greatly increased industry, surely science has taught the use of additional safeguards, so that men are safe from many of the perils that once attended their occupations. It is not by increased labour in the mine, or in the factory, upon the rail, or upon the sea, that the Bills of Mortality are swollen. There are, no doubt, in all employments acts of recklessness and carelessness, making many additions to the cases of violent deaths, but these are compensated in other ways. The heavy death-rate, which is so often and so grievously deplored, is augmented by causes quite distinct from these, and we are not likely to arrive at correct conclusions on the subject so long as our statisticians persist in

ignoring drinking as one of the primary and most influential causes of disease and death. They still continue to regard intemperance as they regard typhus, or scrofula—as the effect of a bad sanitary condition, to be removed, in a large measure, by improved systems of drainage, ventilation, and water supplies. This serious mistake as to the evil consequences of drinking habits, associated as those habits are with every other form of vice and evil, leads our publicists astray, and much honest intention and laborious effort are wasted. We do not wish to intimate one word against sanitary measures; they are a great necessity, and would be required if all the people were strictly sober, but they cannot have any marked influence upon drinking. But drinking has a marked effect in preventing the adoption of sanitary measures, and in making their provisions when carried out of little or no avail. No reform can be largely successful in bettering the condition of the people that does not embrace the treatment of the drinking habits; nor must we expect, without a correction of the drinking habits, a greatly diminished death-rate.

We must now return to Dr. Farr. Under the head of “Local Diseases,” he gives us the following passage:—

“The life of man is so concentrated, that although its multitudinous phenomena are manifested in many organs, no one of them can be deranged without deranging the whole life, and in many cases without inducing death. One man dies because his brain is congested, and another because his lung is inflamed. The diseases of particular organs, which may be called monorganic, constitute the class of local diseases to which in the year 205,264 deaths were referred; the mortality was somewhat above the average by these increasing diseases. This is especially the case with heart disease, to which were referred 11,356 deaths in the year 1850; 18,758 deaths in 1860; and 25,259 in 1870. The increase was progressive and rapid in the twenty years. Looking further back to the five years when registration first began, these affections of the heart were recognised to a still smaller extent; they ranged from 3,562 to 4,925 a year. The deaths ascribed to aneurism amounted to 119 in 1838; to 286 in 1850; to 368 in 1860; and to 627 in 1870. This is a well-defined affection of the great arteries, but it was not formerly detected with so much certainty as it is now. . . . .

“The heart, excited by any violent affections, by athletic efforts, by anxiety, and by extraordinary demands on its forces, is believed by Dr. Quain, and other physicians in extensive practice, to have become more frequently the seat of disease, in consequence of the wear and tear of business, and of the increased mental activity of the age. Their impressions, derived from the study of particular cases, are confirmed by the general results; but it is certain that the strain on the minds of the classes who consult these eminent physicians is not shared by the great bulk of the population that fill up the returns; and the problem can only be definitely solved by a careful analysis of the cases in connection with the occupations of the people.

“The increase of deaths ascribed to apoplexy, paralysis, and insanity, is striking; and in the last year the mortality by them is considerably above the average. Attention has before been drawn to the extraordinary mortality by bronchitis; it appears to point to the necessity of getting rid as much as possible of all mechanical irritants in the air we breathe, and especially of the smoke of towns, the dust of workshops, and the close air of mines.”

In a former part of the letter he says:—

The deaths directly resulting from alcoholic poisoning were 645 ; namely, 337 from delirium tremens, and 308 from the various forms of intemperance. The first thing to note is that men die of these poisonings in greater number than women : of delirium tremens, 294 men, 43 women ; of intemperance, 202 men, 106 women. Two of the males were aged 15 and under 20 ; two of the women were 20 and under 25. The deaths by both forms are most numerous at the ages 35-45, but continue to rule up to the age of 75 ; two old women of 75 and under 85 are returned as having died of intemperance. Like other forms of insanity, the drink madness supervenes in the prime of life ; but as it cuts short the lives of its victims, fewer die at advanced ages of this than of the quieter forms of mental derangement. Mr. Dalrymple has proposed to treat drunkards by restraint ; and there can be no doubt that these unhappy people require help to rescue them from habits as dangerous to the community as to themselves."

We will begin with the subject of lesser importance first ; that is, the number of deaths from alcoholic poisoning. The *Temperance Record* has already drawn attention to this part of the report, and it is obvious, as the writer observes, that the 645 deaths are really a very small portion of those slain by alcoholic drinks. It is only the more conspicuous cases that would be so returned ; and, even in delirium tremens, that fearful disease is often only the precursor of the disease that kills. There is a large amount of infant mortality due to this cause from mothers drinking largely through the months of gestation, and more especially during the period of nursing. There are numerous cases of convulsions from children sucking at the breasts of intemperate mothers, and of others dying from inanition, neglect, and privation, in consequence of the mother's love of drink. The figures Dr. Farr gives are startling enough, but are only a small portion of the deaths from alcohol. At the period of adult life the consequences are equally numerous and fatal, but very few of the deaths from drinking are recorded as such. Dr. Lankester and other coroners have stated that they find a reluctance on the part of juries to return intemperance or drinking as the cause of death, and are willing to accept any special plea to escape such a verdict. In a large number of cases, continued drinking, and where no signs of inebriety have been seen, has laid the drinker upon a sick bed, from which he has never risen, or has risen with broken health or an impaired mind. Dr. Farr suggests that these unhappy people—the habitual drunkards—require help to rescue them from habits dangerous to the community and themselves. It is sound policy to treat the drunkard as society treats the lunatic ; but is there not something more than this required ? What becomes the duty of society in relation to those who are acquiring the drunkard's appetite—who are in training to become drunkards ? Does it admit of doubt that an article which poisons 645 people in a year is unfit to be the beverage of a community

accustomed to severe and incessant toil and the mental exertion consequent upon a life of arduous competition and struggle? However long the question may be postponed, it will be forced upon the nation at last, whether that article which poisons hundreds is suitable for the daily use of the millions among whom these hundreds perish. We support hospitals for the treatment of fever patients, and humane considerations demand that we should establish asylums for the habitual drunkards; but, inasmuch as we are taught to expect that pure air and pure water will banish typhus, it is still more certain that the disuse of strong drinks will banish drunkenness. If sound philosophy teaches us to resort to preventive rather than remedial measures in the one case, it enforces it quite as emphatically in the other. Hospitals in either case can only be expedients, which can be superseded if men will look from the patients to the causes which have brought them to seek treatment and relief.

We return to the more important part of the subject, that which is opened up to us by the statement of the Registrar-General given in the first quotation. It is a lamentable confession of something wrong somewhere. "Still there is progress" seems rather the echo of hope than the expression of assurance. With all the ameliorations of society, from which so much was expected and promised, why should the death-rate be so heavy? and why should there be so much difficulty "in quenching out the pestilences that afflict mankind"? Many of the pestilences known to the Middle Ages are quenched out, and the modern diseases borne on the wings of miasmata are reduced in severity, if not wholly subdued. There are diseases, as there are vices, generated by civilisation, and they take the place of the older plagues, and these explain the tardy or somewhat doubtful progress. In measuring the steps of national advance, it is not sufficient to make the estimate by a comparison of the present with past generations, but by the opportunities which the present generation has had over those which have preceded it. Taking this standard, we are startled to find that while the attainments within the last fifty years are altogether unprecedented in the annals of Great Britain, or of any other country, in relation to the public health we are only able to write, "still there is some progress." As health has an intimate relation to morality, the question is of immense importance. If our material prosperity and intellectual activity do not promote health and morality, for what are we labouring? How is it that in relation to our social evils we are barely able to keep them in check? It must not be overlooked that Temperance Societies have grown up within the period under discussion, and that these societies now number their members by millions. Whatever

views may be entertained as to the soundness of the theory upon which these societies base their practice, it will not be denied that, all other things being equal, abstainers will enjoy a greater immunity from sickness, and amongst them the value of life will be higher than amongst those who indulge in intoxicants, however moderately. Our statistical information on this head is far from complete or connected; as the leaders of the Temperance movement, satisfied by their own observation of the advantages of their principles, have not cared to accumulate or record the facts and figures that are essential to the actuary. The proposition laid down is supported by day-by-day observation, and by general experience; and receives clear and indisputable proof from the statistics supplied to the Social Science Congress at Plymouth, by Mr. Vivian, of Torquay. Those presented by him are returns upon which there can be no mistake, extending over a long series of years, about a third of a century, and are the comparative results of the working of two departments in the United Kingdom and Temperance Life Office; one, the Temperance department, confined to abstainers, and the other, the General department, open to such lives as would be accepted in any respectable office. The increased value of life in the Temperance department is shown to be greater than might have been expected from any *a priori* calculations. It is scarcely necessary to enforce a proposition apparently self-evident. Abstinence from intoxicating drinks among a general community means much more than the direct influence of such abstinence upon the bodily health. It means steady industry, decorous and regular habits, better food, raiment, and shelter, and a higher scale of comforts, all of which are essential to health. It is not only the absence of an article, the daily consumption of which is injurious to health, but the presence of conveniences and enjoyments, which drinkers cannot, or at any rate do not, possess, and which tend to prolong life by making it happier.

It might safely be affirmed that the influence of temperance principles, directly and indirectly, will account for all the progress really made. If this be so, what has counteracted to so large an extent all the efforts of sanitary reformers and others? Is it not that drinking has grown more and more into a habit among certain classes of our countrymen? We use the term drinking advisedly, because so much error has arisen from the use of the terms drunkenness and intemperance. It is well known that habits of drinking, which perhaps are never known to reach the point of inebriety, will often occasion more mental and bodily disorder than occasional fits of drunkenness with long intervals of sobriety. There are numbers of men, and unfortunately of women too, who drink during the day at various times as much

as if taken by the manual labourer in the evening after his hours of work would send him reeling home. The amount of drink taken by regular drinkers would appear incredible if set down to their account. Dr. Anstie in his work on "Stimulants and Narcotics" gives many instances of this kind. It is, therefore, drinking that we have to deal with, not only because it so often leads to what is known as intemperance, but because it generates disease, and renders other diseases unmanageable. We want a philosophy that will go into final causes and trace them to their effects, and this would show what it is that clogs the wheels of progress.

It must be confessed that our habits are such as to encourage drinking. It does not always arise from the love of drink, or a craving for the stimulation it produces, but drink is often taken to soothe pain and soften anxiety, or to enable the frame to sustain prolonged and unusual labour. There is much more suffering and ill-health from over-taxation of mind than over-taxation of body, and the exigencies of our trading and commercial system make every year greater demands upon the population. It is certain that the catalogue of diseases, which, according to Dr. Farr, is now swelled to an alarming extent, does not include any appreciable number of those who lead sober lives and follow regular pursuits. The mechanic and tradesman who go to their daily toil, and from thence to their simple meal and home enjoyments, are not those stricken down by heart disease, or who suffer for years under some affection of the nervous system. The numbers are made up of those who lead irregular lives, or who overtax the brain, and keep up for a time an unnatural and feverish stimulus by high living and much drinking.

This evil is much increased by the practice of medical men. It is not always their fault, for we know instances where medical men have recommended change of air and occupation, with active exercise and simple diet. But these were impossible from the supposed claims of duty on the part of the patient—as if the first duty is not always that of taking care of the health upon which the happiness and usefulness of life depend. How many abstemious men, in order to tide over a period of anxiety or disaster, have resorted to the bottle, and have found in a short time that they have contracted a habit that they cannot conquer. But, unfortunately, a large class of practitioners continue to prescribe intoxicating drinks; and of late years this (which we consider an evil practice) has grown. Scientific men, who are clamorous in their outcries against foul drains and insalubrity of all kinds, insist upon the use of wine and beer, which are proved in the aggregate to be much more destructive agents than bad air and bad water.

These hasty reflections conduct us back to the point from which all enquiries should commence. Why is there so little progress? Because of our drinking. Why are new diseases springing up and old ones assuming a more malignant form? Because of our drinking. If the enquiries directed from the Registrar-General's office could be so shaped as to embrace not only the ostensible causes of death, but the causes of the diseases which are put forth as the causes of death, the value of the returns would be incalculably increased. They would at once correct the notion which is at once so popular and so mischievous, that intemperance is to be removed by improving the homes and elevating the scale of comforts of the population. It would then be seen that a correction of the drinking habits is the one essential basis on which to build all the measures from which are to be expected improvements in the public health, and an elevation of morals.



## DR. DRUITT'S REPORT ON CHEAP WINE.

ALTHOUGH so much wine is consumed in England, there are not many wine drinkers who understand the manufacture, the chemical composition, and the physiological properties of wine. Wines called by different names, of different colours, odours, and flavours, are advertised, and are bought and swallowed by ladies and gentlemen who really "pour liquors of which they know little into stomachs of which they know less." And, as the use of wine, as well as the use of other alcoholic liquors, causes intemperate drinking, disease, and other evils, any one who makes known the true nature of wine may be regarded as a public benefactor. In 1863 and 1864, a series of articles by Dr. Druitt on cheap wines appeared in the *Medical Times and Gazette*, and was published in a collected form in 1865. The book was soon out of print, and "daily occupations and wretched health" prevented the author from revising it; but at last a second edition is issued. Dr. Druitt is a firm believer in the wholesomeness and usefulness of wine, and says all that can be said in its favour, and, indeed, a great deal more. He is an enthusiastic advocate for it in health and in sickness; and, like all apologists for the use of alcoholic liquors, he denounces adulteration, and only contends for the use of the pure article. Dr. Druitt does not give us any simple or scientific tests by

which pure wine may be distinguished. In fact, he does not attempt to deal with the subject scientifically. He says:—

“The only way of dealing with it is the ‘empirical,’ or the collection of ascertained facts as they occur in daily life. This is the true scientific basis of diet and therapeutics. Science has no means of dealing with them *à priori*. We know that wine is greedy of oxygen, and that the animal body is an oxydising machine, par excellence. We therefore affirm that wine is a true food. Parkes teaches us that it increases the action of the heart. Beyond that we know nothing, save by ordinary observation.”

Dr. Druitt says that wine is greedy of oxygen: the fact is this,—that when wine is exposed to the action of air, oxygen is absorbed, chemical action is set up, and the wine becomes sour; but how this proves it to be a true food does not appear. Nor can we conceive how the fact that wine, in common with spirits, can derange the action of the heart—can prove it to be a true food. The belief that wine is a true food is certainly “empirical.” Dr. Druitt says:—

“The object of my writing is to show the excellence of wine, or fermented grape juice, as a beverage. But unluckily we are confronted with some of the scientific criminals, the felons of the laboratory, the forgers of the cellar, and pirates of the stomach, who would fain persuade us that all the virtues of wine are due to one ingredient—alcohol; and that, therefore, there is no harm in adding alcohol to wine, or making a sham wine by fermenting sugar and water with the husks of grapes from which the juice has been extracted.”  
—p. 5.

Dr. Druitt furnishes no tests by which we can ascertain whether a wine is genuine. He says:—

“The only questions we need ask are, not what is the chemical composition, but do you like it? and does it agree with you and do you no harm? The stomach is the real test-tube for wine; and if that quarrels with it, no chemical certificate and no analysis is worth a rush.”—p. 6.

This is empiricism with a vengeance. Can anything be more absurd than to take the evidence of a palate, a stomach, and a nervous system affected by alcohol, as a proof of the purity and goodness of wine? Do not the drinkers of adulterated wines fancy that these wines agree with them, and do them no harm? Why, even the persons who use ardent spirits fancy these fiery liquids do them no harm. If the unassisted senses were a sufficient guide in the selection of wines, who would buy the impure and adulterated? All the wine drinkers, we know, imagine their wines to be of the best quality; and we are unacquainted with any who, knowingly, use bad wines. If we call in chemistry to our aid, there are no simple tests adapted to popular use by which to recognise pure wine. We find wines of the same name vary in specific gravity—in acidity, in strength, in sugar, in albuminoid matters—in the different ethers, and in

the amount of ash. It is, therefore, no wonder that Dr. Druitt did not attempt to give the means for discriminating between pure wine and the sophisticated. Under the name of wine, liquors of different origin and composition pass current and are frequently prescribed for the sick, neither patient nor physician having any real knowledge of their composition and properties. There is, however, one thing in which all the coloured liquids called wine agree; they all contain alcohol, and, in spite of all that prejudice or appetite, or interest, can urge, alcohol is the all-important ingredient. It is alcohol which enables the wine to cheer, to stimulate, to depress, to intoxicate, and to create that love of drink which ends in intemperance. The acids, the tannin, the ethers, and other things in wine are of little moment compared with the alcohol.

There is a term employed in reference to wine which is calculated to mislead. We refer to the phrase "natural wine," which is intended to convey the idea that this wine is simply the pure fermented juice of the grape, to which nothing has been added and from which nothing has been abstracted. Such wine is a myth, it has no real existence. All wine is an artificial production. In wine-making there is considerable skill required. Wine, after it is fermented, has to be racked, fined, sulphurised, and subjected to other processes, and many wines have spirit added to them. Dr. Druitt says:—

"The fact remains that many wines are fortified, as Port is to a pitch nearly double the natural standard, and a good many other wines are fortified, though not to the same extent. And the question is, why? The reasons are twofold: first, because the wine is not well made, and has not nerve enough to keep and travel; or, secondly, to please the vitiated taste of the consumer. Travelling implies movement that stirs up all sediment; exposure to cold, which precipitates soluble matter, makes the wine thick, and so creates pabulum for fermentation; alternating with heat which sets ferment a-working, and leakage which allows access of oxygen."—p. 47.

The fact is, that wine contains a quantity of dead vegetable matter, prone to decomposition, and when there is a deficiency of spirit this dead matter is soon decomposed. And just as alcohol preserves our anatomical specimens from change, so in the wine it suppresses parasitic growths, and preserves vegetable matter from fermentation. Wine is subject to various diseases. Dr. Druitt gives a clear description of these maladies. One of them is the malady of bitterness, respecting which Dr. Druitt says:—

"It is easily recognised, thus: invite a man to a friendly dinner; begin well, with a little glass of old Madeira, next a glass of some appetising light wine; then whilst he takes his slice of mutton, invite him to take a glass of Volnay or Assmannhauser, and let him be helped first. It is the critical point in the dinner, hunger beginning to be appeased and the palate in its highest state of receptivity. You watch the guest as he sips the wine during a pause in some

joyous talk. That which was satisfaction in his demeanour should be ecstasy. But no ! the thermometer of his visage sinks ten degrees ; he hesitates, looks sad. Can it be that he is ill ? Alas, no ; you turn to the glass poured out for yourself, and there, instead of the bright, ruby, delicious mouthful, you have as it were a prematurely old, thin, yellowish-brown, sad liquid with no taste of wine, no alcoholic strength, only a flat bitterness. What are you to do ? First, resolve that you will never offer a guest an old red wine out of the bottle without preliminary examination and decantation ; secondly, give him the best substitute at hand.”—p. 59.

Dr. Druitt gives some woodcuts which give a rough idea of the sediments in wine as seen with the microscope. In looking at these, and on considering the uncertainty as to the origin and composition of wine, and the chemical changes to which it is liable, we felt sincerely thankful that we have long since ceased the ingestion of these strange mixtures. One curious thing relating to the use of liquors containing alcohol is, that whether they are sweet, or bitter, or sour, the alcohol is sufficient to induce some persons to drink them. We have noticed this in reference to malt liquor as well as in the case of wine. Let any one look at the fine ale brewed at Burton, and contrast it with some of the wretched stuff dignified with the name of “ home-brewed,” or the vile stuff sold at some of the beershops ; and different as these liquors are in appearance, as well as in chemical composition, the alcohol is sufficiently powerful to render them palatable and pleasant. It is just the same with wine. Hambro’ sherry, or other vile compounds, find a ready sale ; the alcohol hides all their faults and serves as a passport to the unfortunate stomachs of the wine drinkers. In reading Dr. Druitt’s book we were forcibly struck with the fact that he seems to take it as beyond all doubt that some kind of alcoholic liquor is necessary. He appears unconscious of the important fact that the most perfect health may be maintained without the aid of alcohol. We think that if the Doctor had tried as long and as zealously the effects of living without alcohol, as he tried the effects of the different kinds of wine, he would have found that there are more things in heaven and earth than are dreamed of by wine drinkers. It is really surprising that men of intelligence, especially medical men, should continue to take alcoholic liquors without inquiring whether these things are necessary or useful. There are two sides to this question : the majority of the people and the medical profession have examined one side of the question ; a rapidly increasing minority of the people and the profession have examined both sides. And what is the result of a fair investigation of the comparative advantages of using alcoholic liquors, or abstaining from them ? Why, as far as we have been able to ascertain the opinion of intelligent men and women who have tried abstinence, and from our own observation of its effects upon persons of all

classes, in health and sickness, we are fully satisfied that, all other things being equal, the abstainers have better health and spirits, better appetites and sounder digestion, suffer less from sickness, and when ill sooner recover, and live longer than persons who indulge in intoxicating liquors. All this will be clear enough to those of our readers, whether in the profession or out of it, if they have fairly tried the experiment of abstinence from alcohol; but to those who have been trained up to take alcohol, and who, by its habitual use, have created what may be termed an alcoholic appetite, our view of the advantages of abstinence will appear unreasonable. Our ideas of the effects of alcohol differ widely from those of Dr. Druitt; he recommends wine for children who suffer through want of appetite; and he says:—

“To persons of the gouty and rheumatic temperament, maladies which they vainly attempt to keep at bay by the driest of diet, such as meat, bread, and brandy-and-water, Bordeaux wines are of especial service; they neither turn sour themselves, nor are they the cause of sourness in other articles of food.”—p. 82.

This may seem right enough to one who has not seen the effects of abstinence from the whole family of alcoholic liquors; but those members of the profession who have treated gout and rheumatism without any kind of alcoholic liquor will see at once the absurdity of supposing Bordeaux wine to be of especial service in those diseases. We need not point out all that we regard as errors in Dr. Druitt's views of the medical use of wine, but his recommendation of wine to nursing mothers requires a short notice. Dr. Druitt says:—

“I affirm that whilst the labouring man's wife, with her active muscular system, can nurse very well on table-beer, and wants not a drop of gin, so the lady, with her more active nervous system and delicate organisation, can nurse very well on pure clean claret. She may drink abundantly of it, and be fresh, young, rosy, and fit for another innings when her duties are over.”—p. 83.

Now, we are convinced that nursing mothers, of all classes, may do much better with plenty of nutritious food than they can with any kind of intoxicating drink, and proofs of this are to be found in all parts of the country. There is, however, another and serious objection to Dr. Druitt's suggestion that delicate ladies when nursing should drink claret abundantly, namely, that if this advice is followed we may expect an increase of drawing-room alcoholism. We know that the free use of the weaker kind of wines, such as claret, can create an alcoholic appetite which will in time require stronger wines or brandy. In fact, all the victims of intemperance we have known, whether males or females, began their drinking career with the weaker kinds of alcoholic liquors. When Dr. Druitt was examined before the Committee of

the House of Commons on Habitual Drunkards, he said :—" The class that I appeal for are chiefly women of the upper classes, or men, who are led to secret drinking for the relief of misery, bodily or mental." He was then asked the question, " Do you mean that the secret drinkers are largely women?" His answer was, " Yes." He was then asked the question, " How do you account for this secret drinking, especially amongst women?" He replied—

" First from bad information, or rather a vicious opinion of the effects of alcoholic beverages on many complaints, and from what I cannot help calling the almost reckless use of the stronger forms of it when weaker ones would suffice; sherry, for instance, instead of Bordeaux wine. Then, in the next place, they come to be resorted to for the cure of bodily maladies that the physician ought to see to but does not, or for the cure of private miseries and grievances which the sufferer takes that means of relieving instead of better ones."

Now, how is this vicious opinion of the effects of alcoholic beverages produced? We think by the customs of society, by the influence of alcohol upon the nervous centres, and especially by the prescription of these beverages by the medical profession. Dr. Druitt, in the examination to which we have already referred, was asked—

" Are you of opinion that members of your own profession have not unfrequently prescribed the alcoholic remedy when it would have been better for them to have prescribed the medicinal one?"

He replied—

" I do not think that they do so as often as is suspected; occasionally a practitioner may be rash in recommending port wine or brandy for the cure of debility; but in general the people who take it, take it of their own accord."

The people take it because they are ignorant of its nature and effects, and this ignorance is perpetuated by the medical recommendation of alcoholic liquors. What, for example, can be better fitted to create an erroneous opinion of the value of alcoholic liquor than Dr. Druitt's statement, that " a lady with her more active nervous system and delicate organisation can nurse very well on pure clean claret. She may drink abundantly of it and be fresh, young, and rosy"? We will not enter into the physiological question as to the quality of the milk manufactured out of claret, but we will confine our remarks to what may be called the moral effects of the Doctor's advice. Let the nursing mothers of England, or other ladies of delicate organisation, drink abundantly of claret under the impression that it can make them " fresh, young and rosy," and the alcohol in the claret will do its work on their nervous organisation; the belief in the medicinal virtues of wine will be established, an alcoholic appetite will be created, secret

drinking will increase, and the victims of intemperance will be multiplied.

In drawing this article to a close we must notice the fact that Dr. Druitt labours under what we look upon as the light wine delusion. He, in common with many others, looks upon cheap light wine as calculated to promote temperance. The idea that light wines would diminish the consumption of the more highly brandied wines and ardent spirits was urged as one reason for the reduction of the duty on the weaker wines. But this idea is not borne out by experience. There has been a great increase in the consumption of light wines without any corresponding diminution in the consumption of the stronger wines and ardent spirits. Indeed, no one who carefully studies the action of alcoholic drinks will believe that weak alcoholic drinks will supersede the use of the strong. The course of drinking is the reverse of this. Men begin with the weak and pass on to the stronger. They do not give up strong ale and take to small beer. Nor do they forsake brandy in order to drink claret. There is an agitation going on now for a reduction of the duty on Spanish and Portuguese wines. If this take place we shall soon see that men have drunk the weak wines not because they liked them better than the strong, but because they were cheaper. Of course the weaker liquors are not so injurious as the strong if taken in the same quantity ; but generally, when persons take weak wines they take a larger quantity, and in that way compensate for the deficiency of alcohol. Looking at the use of wine from a health point of view, we are convinced that great numbers suffer from its use even in moderate quantities ; and this is especially the case with persons suffering from debility. It is in vain they try to get health from alcohol ; if they get relief it must be from natural stimuli, and not from narcotic poisons.



## THE COSMIC LAW OF INTEMPERANCE.

SOME months since the Massachusetts State Board of Health issued its third Annual Report. Therein Dr. Bowditch, of Boston, endeavoured to establish, from data supplied by correspondents in various parts of the globe, a law accounting for the prevalence of drunkenness. This law, based on conditions of climate and race, is thus stated :—

“ Intemperance prevails the world over, but it is very rare at the equator.

The tendency increases according to latitude, becoming more frequent and more brutal and disastrous in its effects on man and society as we approach the northern regions."

Dr. Beard, of New York, has written a pamphlet in which he examines this doctrine. He alleges, 1, that the data on which Dr. Bowditch bases his propositions "are of themselves incomplete and unsatisfactory, and are insufficient to establish a cosmic law." 2. That the so-called law "is but partially true." 3. That Dr. Bowditch gives a greater relative prominence to climate as a cause of intemperance than a wide survey of the facts that bear on the subject will justify. He states with regard to objection 1, that the letters of inquiry were sent to individuals, many of whom had neither the opportunity nor the capacity to give any just and reliable information on the subject; "that, as a matter of fact, replies came only from forty-nine different places;" this number even Dr. Bowditch admits "is too small to lay down perfectly positive laws, in regard to the topics suggested." Dr. Beard states, in support of objection 2, "The isothermal lines of 77°F. mean annual temperature, north and south of the equator, between which according to Dr. Bowditch intemperance is rare, enclose vast armies of drunkards." In reference to objection 3, he says: "Granting that, *in the long lapse of ages*, climate is the leading factor that determines the difference of race, yet in appreciable historic time—certainly for a number of generations—race is everywhere more potent than climate."

Thus far Dr. Beard has made good the ground of his objections. He then gives his version of the cosmic law as follows:—

"Intemperance has existed in all recorded ages, and in all parts of the globe where alcoholic liquors of any kind are attainable. It is most common and most disastrous in its effects in the colder regions of the northern hemisphere, and especially in those climates that are made disagreeable and trying by extremes of heat and cold. It is, on the whole, for various reasons, less common in the tropics, and is most rare and least disastrous in its effects in the southern portion of the north temperate zone, where the climate is uniformly mild and agreeable."

This statement is to be preferred to that of Dr. Bowditch, (who quietly drops Hamlet out of the tragedy), because it recognises to some extent the prime factor in the production of drunkenness—alcohol. But it does not do this with sufficient directness. A fair statement of the cosmic law of intemperance would be this:—Drunkenness has prevailed in all ages in proportion to the consumption of alcohol, which is drunk for the sake of the pleasure it excites. The consumption of alcohol has always prevailed in proportion to the facilities which have existed for procuring it.

The love of pleasurable excitement is instinctive; it has existed

in all ages and climes ; it, more than anything else, determines racial peculiarities. Alcohol is an agent which very rapidly ministers to this desire for enjoyment. When drunk it sends the blood to the brain of the drinker in increased volume ; if the quantity consumed is not too large, there follows an agreeable consciousness of augmented power, pleasurable emotions are heightened, weariness is relieved, care is banished, sorrow assuaged. After a time, the quantity previously producing the wished-for state fails in its effect ; there has been a blunting of the perceptions ; larger doses are therefore indulged in. Indulgence in pleasure has a tendency to excite a craving for its repetition ; thus the risk which any individual runs of becoming intemperate is chiefly measured by the pleasure which he derives from indulgence in liquor, and the facilities for procuring it. Individuals make communities. Sensuous indulgences are apt to spread rapidly, especially amongst the more wealthy, and therefore influential part of the community. The habits of the upper spread to the lower classes, and so the evil grows and corrupts, and, unless a few powerful minds arouse timely and adequate alarm, ruin ensues. Now, Dr. Beard seems to comprehend as little as Dr. Bowditch the real philosophy of this subject. How completely it is overlooked by the former may be perceived from the following. He says :—

“ Whether a nation is to be temperate or intemperate depends on the following conditions, which I name in the order of their relative importance :— 1, Race ; 2, Climate ; 3, Social position (including religion, education, and government, and financial status) ; 4, Kind of liquor employed. Given these factors—bold, energetic races, trying and disagreeable climate, gross ignorance and poverty, and adulterated distilled liquors—and we have intemperance. Given timid and indolent races, mild and equable climates, high intelligence and education, and wealth, and pure native wines, or mild fermented liquors, and we have temperance.”

Now these generalisations are crude and defective. That any one enumerating the conditions which influence the temperance or intemperance of a nation should overlook the effect of law is truly remarkable. Its potency in a secular or religious form is shown in the histories of China, India, and other eastern countries, as well as in Europe and America.

Another error into which Dr. Beard has fallen consists in his making “ the kind of liquor consumed ” a prime factor, instead of a subsidiary circumstance. Nor does it appear very clearly what is meant by “ kind of liquor,” since this may mean distilled or fermented, weak or strong, adulterated or unadulterated. He seems to lay great stress on the kind of liquor, for in the additional generalisation above quoted it will be seen that he places adulterated distilled liquors amongst the most important causes of intemperance, and pure native wines or mild fermented liquors,

amongst the contributories to temperance. Now all this further shows how shortsighted are the views, and how imperfect is the grasp of the subject, manifested by Dr. Beard. Mildness or strength of liquor, purity or impurity, are only accidents; the presence of an alcoholic stimulant is the essential condition on which intemperance depends. Unless this fact is fully recognised, the advice of the physician will be untrustworthy, his proposed remedies will not cure.

Banish alcohol from a community, and all the other factors which Dr. Beard enumerates may exist, and there will be no drunkenness. On the other hand, given timid and indolent races, mild and equable climates, high intelligence and education, wealth and pure native wines, or mild fermented liquors, and we shall sooner or later have intemperance. Mahomet recognised this, and banished alike the light wines and the mild fermented liquors which were commonly drunk by the people amongst whom he dwelt. There were no "adulterated distilled liquors" in those days, but there was no lack of intemperance.

Dr. Beard states that "the means for diminishing intemperance, which are at all under human control, are the following," which he gives in what he believes to be the order of their relative importance:—1. Education, literary, technical, scientific, moral, and religious. 2. Diffusion of material comforts. 3. Popularisation of pure wines and mild beers. 4. Restriction of the use of strong and adulterated liquors. Of these four supposed methods of attacking intemperance, we are told that "the first mentioned is not only more important than all the others, but is really worth more than all the others combined." Now where a great and pressing evil has to be met, the indulgence in indefinite generalisation amounts to little more than mere barren talk.

Dr. Beard would regard the man as demented who should simply propose teaching physiology as the means to be employed for curing the victims of fever, or for banishing cholera from an infected neighbourhood. To teach boys the laws of health is very wise, but where a heavy death-rate is the result of vile and active nuisances, it is not the schoolmaster so much as the sanitary inspector who is needed. To wait for the spread of general education would be a fatal error. Whilst the grass grows the steed starves. In dealing with the suppression of drunkenness, the first consideration must be, how can the people be best induced to abstain from the use of alcohol?

The second suggested means for diminishing intemperance, "Diffusion of material comforts," is about as practical a remedy as the first. It is true that as a rule drunkenness and squalor are associated, as are sobriety and home comforts; but in ninety-nine cases out of a hundred these conditions are cause and effect.

If men will be drunken, reckless, and improvident, they will be poor, miserable, and degraded; this has been ordained by Heaven, and it is useless for Dr. Beard or any one else to try to bring about any other result. The third mode whereby intemperance is to be banished is the most quackish of all: viz. "The popularisation of pure wines and mild beers." Such a recommendation is the more remarkable since, on the page preceding the one giving this precious recipe, we read:—"Ancient history throughout refutes the popular notion that wines are to solve the temperance problem for the moderns. . . . The climate of Persia and Babylonia, and ancient Italy, were not such as foster intemperance, but in all these lands there was intoxication and plenty of it, and it was fed by pure and simple wines." Twelve years ago the popularisation of pure light wines was to work wonders in promoting sobriety in England. Alas for the result! We were being constantly told how sober a people were the French with their abundance of pure wines. With increased commercial activity and augmented wealth, we have seen increased drinking and drunkenness; the light wines have had to give way to the stronger ones, whilst the drinkers of the latter have had recourse to brandy, and the brandy drinkers have sought a still stronger stimulant in absinthe. The same state of things is reported of almost every Continental country, except Sweden. With increasing prosperity there is a great increase of intemperance.

The fourth and last proposal is the "Restriction of the sale of strong drink and adulterated liquors." What Dr. Beard's opinion is respecting this proposition may be gathered from the following statement: "The shortsightedness of politicians, statesmen, and philanthropists is shown by the fact that, during most of the agitation on this subject, attention has been mainly directed to the last and least important of these four methods." Thus the only proposal which would specially and speedily diminish intemperance is tossed aside with almost contempt. Education, "in the broad sense of the term," is to be the panacea for all the social evils which so many communities of the drunken races groan under. But, in the name of common sense, how is sending children to school to improve the condition of the present large and increasing class of wretchedly poor, wretchedly ignorant, and universally despised and oppressed citizens, without good food or comfortable clothing, or decent homes, and without any social position or aspiration? Almost the only chance of rescue for millions of the drunken races is to diminish as rapidly and as far as possible the facilities for procuring alcohol which now terribly and so fatally tempt them.

"Education, in the broad sense," did nothing to stem the

torrent of intemperance in Sweden ; restrictive laws did wonders. Education, in the broad sense, carried on hand-in-hand with education in the matter of the effects of alcoholic liquors on individuals and nations, especially if the law were made one of the teachers of temperance, would do much. Without such special educational agencies, all others will prove comparatively useless. Dr. Beard alleges that "in France, during the last quarter of a century, ignorance has increased." In Great Britain, "the poorer classes have either remained stationary in their poverty, or have been gradually sinking into deeper depths of wretchedness and degradation." But "education, in the broad sense," has for a quarter of a century been making rapid strides in France and Great Britain, and indeed over many parts of the continent of Europe, as well as in the United States. Has intemperance been proportionately diminished? Let Dr. Beard reply: "There never has been a period in the history of civilisation when intemperance among the depressed and dangerous classes of Europe and America was more prevalent or disastrous in its effects than it is to-day."

Dr. Beard is strongly opposed to teetotalism and teetotalers. He disapproves of their moral and legal modes of action, and hence he is led into numerous absurdities and contradictions. If abstinence from alcohol were universal, men would rush, he says, into other forms of intoxication. If alcohol were prohibited, men would fly to opium ; if opium were banned, then tea and coffee would be abused ; if tea and coffee and tobacco were also included under the anathema, men would be driven to something else. Well, then, let us draw the line at tea and coffee. Ah ! says the Doctor, determined not to be beaten, "In my own practice and observation amongst the intellectual classes, I find very many more are injured by coffee and tobacco than by alcoholic liquors." We can only say in reply, that Dr. Beard's sphere of practice and observation is unique. He alleges that "the most powerful ally of the temperance cause in recent times" in the United States "has been the increasing nervous susceptibility of our brain-working classes, that compels them to abstain not only from ardent spirits, but also from tobacco, from tea, and, in our Northern States, from coffee." When we find a particular individual making such startling statements as these, and confounding articles which have tended most to promote sobriety with those which have most led to the spread of intemperance, we look to see whether the man is seeking to support a pet theory. Only a man who is put to desperate shifts would give utterance to such an opinion as the following :—

"Of all the stronger stimulants and narcotics, wines and fermented liquors are the least injurious, and any legislation that tends to discourage their manufacture and importation is so far pernicious to society."

This, be it remembered, is from the man who had previously set down restriction of the sale of strong liquors as one of the means for diminishing intemperance. We have noted some other contradictions in Dr. Beard's pretentious pamphlet equally absurd, but it has been shown with sufficient clearness that the Doctor is not animated by a philosophic spirit, and that his views are crude and untenable.



## ALCOHOL AS A CAUSE OF BRIGHT'S DISEASE.

It will be perceived that we have devoted a considerable amount of space in our present issue to the controversy which has appeared in the pages of the *British Medical Journal* respecting the action of alcohol on the kidney. The various letters and articles afford a valuable indication of the present state of medical opinion on the subject. Dr. Dickinson, in his work on "Albuminuria," sought not merely to disturb, but almost to overturn the settled belief of renal pathologists respecting the injurious effects of alcohol on the kidney.

It is not to be wondered at that he excited considerable surprise, or that his statements were sternly scrutinised. The Doctor had obtained from the records of St. George's Hospital the results of the post-mortem examinations of adult males, who had died of delirium tremens, as well as those of the same number performed on adult males whose deaths had been caused by accident. Subsequently he obtained from the same source the results of the post-mortem examinations of 149 persons who were engaged in the liquor trade—publicans, potmen, and others, and contrasted them with the results shown by the post-mortems of 149 persons who had died in the hospital, but "who were not known to have been intemperate." Thus it is apparent that Dr. Dickinson had taken it for granted that the persons contrasted with the delirium tremens cases, and liquor sellers, were not intemperate. Finding very little difference in the occurrence of renal disease in the two cases, he came to the conclusion that persons who are not intemperate suffer nearly as often from Bright's disease as do hard drinkers. It is truly surprising that any one conversant with hospital practice could have overlooked the fact, that the great majority of the adult males who die in the hospital are more or less of intemperate habits. In a leading article on street accidents, which appeared some time ago in the *Lancet*, it was

pointed out that the surgical wards of our hospitals were filled with cases caused through drunkenness. In the medical wards matters were no better. It is not to be wondered at that the editor of the *British Medical Journal* should take a gentleman seriously to task, who sought to disturb the general professional belief on such fallacious data.

The editor very properly suggests that a certain number of total abstainers, of at least five years' standing, should be contrasted with an equal number of persons of drunken habits. All the evidence which has been accumulated goes to show that, although the kidneys are not as a rule so much affected by the imbibition of alcohol as are the brain and liver, nevertheless they are nearly always more or less affected in cases of chronic tipping. It will be well for persons who are by no means regarded as being intemperate, who suppose, indeed, that they are "never the worse of liquor," to know that they are gradually sapping and mining the foundations of their constitutions. Dr. Roberts, speaking of the results which too frequently follow from the so-called moderate drinking of such persons, asks, "Are these effects less real because they are produced more slowly?" He replies, "There has, I believe, been too little attention paid to the effects of these long continued small excesses of alcoholic drinking, which do not, as hard drinking often does, rob a man of three-fourths or one-half his life, but which curtail his life by some ten or fifteen years."

A very interesting piece of information has been furnished by J. T. Mitchell, Esq., F.R.C.S., Medical Director of the Temperance and General Provident Institution, from the records of deaths occurring during three years amongst the persons assured in that office. It will be remembered that the lives assured in this office are divided into two classes, those of moderate drinkers and those of total abstainers. It is known that in the section for moderate drinkers great attention is paid in the medical examinations to the abstemiousness of the proposers for assurance, so that the lives may be especially regarded as being picked ones. Nevertheless an examination of the registry of death shows that nearly double the number on the moderate drinking side die from renal disease, as compared with those on the abstaining side. What then would the proportion be were a comparison made between total abstainers and drunkards?

We commend the subject to the attention of our readers as one of great interest. Although necessarily disagreeing with Dr. Dickinson's conclusions, we tender to him our sincere thanks for the attention he has given to the subject. He must remember that the best may err, and that his wisest course is candidly and goodhumouredly to acknowledge that he has been misled.

Nothing tends so greatly to inspire confidence in public men as a manifest disposition on their part to sacrifice their own announced opinions when they are shown to have been wrong. Dr. Dickinson's position as a pathologist is a distinguished one, and we have perused his account of the morbid effects produced by alcohol with much pleasure, since it has given greater definitiveness to our acquaintance with the subject. He thus epitomises his indictment against the scourge of the nation:—"In brief and final enumeration, alcohol replaces more actively vital materials by fat and fibrous tissue; it substitutes suppuration for new growth; it promotes caseous and earthy change; it helps time to produce the effects of age; and, in a word, is the genius of degeneration."



## Miscellaneous Communications.



### THE USE OF ALCOHOL IN HEALTH AND IN DISEASE.\*

By J. W. EASTWOOD, M.D. *Edin.*, M.R.C.P. *Lond.*, *Dinsdale Park Retreat, Darlington.*

AT no period within the present century has it been necessary to apologise for introducing such a subject as this to the consideration of medical men; for alcohol in its various forms has played a prominent part, whether for good or for evil, in our national habits as an article of diet, and in our systems of treatment as a medicinal agent. Some years ago, however, within our own recollection, there would have been less toleration for discussing this question than at the present time. A spirit of inquiry has arisen, and we can no longer take for granted the dicta and the practices of our fathers, whether it be on this or any other subject. Some of the very principles of medicine, once laid down so clearly and authoritatively that it

were heresy to disbelieve them, are in an unsettled state, and we must find our way out of this uncertainty as best we can. That the result will be satisfactory, and to the gain of medicine and science, I have not the least doubt, for nothing is more fatal to progress than indifference, or than *jurare in verba magistri*. To no subject are these remarks more applicable than to the one I have chosen to bring before you, in the hope that, if I can say nothing positively new, it may lead to useful discussion and careful observation for the future. At the present time, I am glad to see so large an amount of interest taken in this question throughout the country, not only by those who are professed total abstainers, but by scientific men and others who are in no way disposed to admit extreme views. Of the importance of the subject, it is only necessary to state that during each year about 1,000 millions of gallons of

\* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Birmingham, August, 1872.

alcoholic beverages are drunk in this country. And in one of the annual reports of the Registrar-General we find among the causes of death, under the head of alcoholism, the following numbers :—

	Males	Females	Totals
Delirium tremens	390 ...	49 ...	439
Intemperance	... 247 ...	... 102 ...	349
	<hr/> 637	<hr/> 151	<hr/> 788

And this is only a small part of the mortality and disease produced by this cause.

Under the term alcoholics I shall include all the varieties of drinks in which alcohol is the principal element. They may vary in strength, in colouring and other matters, but they owe their active effects to the quantity of alcohol they contain. There are undoubtedly good and bad articles ; but we hear some people say that good wine or good brandy—and it must be really good, they tell us—never did any one harm ; which means, when translated literally, that no amount of alcohol will do harm.

The subject is naturally divided into two parts ; firstly, the dietetic use of alcoholics in ordinary health ; and secondly, their medicinal use in feeble health and in disease. When used in health they act as stimulants, especially to the nervous system, and, according to some persons, as nutritive agents. The different kinds of spirits, wines, and malt liquors owe so little of their use to the presence of anything except alcohol, that we may very briefly dismiss this part of the subject. The presence in gin of a diuretic, in champagne of an exhilarant, carbonic acid, or in beer of hops, does not materially alter the general effect produced.

At the present time there is an extensive use of alcoholics as articles of diet in all classes of society, notwithstanding the efforts of total abstainers for many years past. The inquiry that is now taking place is not exclusively in connection with the so-called temperance movement ; for many men have come to the conclusion, as I have myself, that teetotalism

has failed to produce any serious impression upon the drinking habits of this country. On the social part of the question it is not my intention to do more than to mention that I read a paper on “Intemperance in its Medical and Social Aspects,” in the Public Medicine Section of the British Medical Association at Newcastle, which is published in the *Journal* for January 28th, 1871. The universality of alcoholic drinking—for there is scarcely a country where it does not exist—is certainly an argument in favour of its moderate and dietetic use, founded on gratifying a natural desire. The precise manner in which the alcohol acts has been, and still is, a most uncertain question. So important a matter cannot be settled by any man’s private observation ; and though I was for years a total abstainer, whilst now I am not, yet I cannot pretend to throw any light upon the subject from personal experience. The question must be decided by reference to larger numbers than have yet been brought systematically together. Whether alcohol acts as a useful nerve-stimulant, or as a nutritive, or as neither, is the great question to be solved. I have frequently found myself that moderate quantities of wine produced neuralgia of the scalp. The uncertainty of the whole subject, and the want of some general principles to go upon, is being felt seriously by many members of the profession.

We are concerned now with the dietetic and moderate use of alcohol, and in the *Practitioner* this is stated to be six drachms of absolute alcohol, or two glasses of wine for women, and twelve drachms or two ounces for men, equal to about four or five glasses of wine daily. Are these or any other quantities necessary to persons in health, and does their use in any way assist in the performance of healthy functions or in prolonging life ? A statement was made some years ago, and signed by about two thousand medical men, some of them of great eminence, and not total abstainers personally, that persons in health required no alcoholics, and were better without them. Is this opinion

as general now, and if not, why so? Can we give any reasons for the opinion that alcohol is necessary in health? Let us do away with mere individual statements, and trust to results obtained from the experience of larger numbers carefully compared. The fact exists, that many persons take moderate quantities of alcoholics and enjoy good health, and many other persons take none at all and likewise enjoy good health. It has, however, been observed that total abstainers of the second generation are not good examples of the truth of their practices; but then, again, the children of moderate drinkers are also sometimes unhealthy. We know that the children of drunkards are often imbecile or insane, or in some way degenerate in health. What, then, becomes of the alcohol taken in dietetic quantities? Is it given off as alcohol, or is it consumed in the system, or is it partly given off, and partly oxidised? Perrin, Lallemand, Duroy, Percy, Edward Smith, and others believe that it is all given off; whilst Anstie, Thudichum, Dupré, and others believe that only a small part is given off, and the rest consumed. The experiments of Dr. Parkes and the late Count Wollowicz are amongst the most interesting which have been made, and they proved that even one ounce of alcohol taken daily caused increased action of the heart to the extent of four or five beats, which increase continued almost in proportion to the quantity taken; so that, with eight ounces of alcohol, the average pulsation was increased 17 beats per minute. Thus a large amount of work was thrown upon the heart, and no corresponding good obtained. The fall of temperature under the use of alcoholics has been very distinctly ascertained by Dr. B. W. Richardson, who says: "So soon as the alcohol makes its way into the organism, and diffuses itself through the fluids, so soon there is depression, so soon respiration falls, carbonic gas from respiration decreases, and muscular strength, consciousness, and sensibility decline." Notwithstanding this, he is prepared to admit that a certain

amount of oxidation of alcohol takes place, but only under certain circumstances. The last experiments of Dr. Dupré show that only a small portion of the daily quantity of alcohol is eliminated by the secretions. Dr. Subbotin states in a German journal that he has made a series of experiments on rabbits, and he found that about 7 per cent. of alcohol was eliminated. More recently, the amount has been as much as 12 and 16 per cent. He thinks alcohol cannot be considered as a food, as it diminishes the metamorphosis of the tissues, lessens the temperature and the amount of carbonic acid secreted, and diminishes the discharge of urea. The old notion that alcoholics keep the body warm is shown by actual experiment to be false. In the brandy and hot water taken to keep the cold out, there is some excitement and decrease of sensibility produced, with a temporary increase of heat; but this last result is owing simply to the hot water, whilst, after this effect has passed off, the temperature of the body is lower than it was before. The experience of all arctic voyagers leads to the same conclusion, and it is so well known, that the medical officers of northern expeditions forbid the men to take spirits in the extreme cold of the frozen regions. The decision, then, as to the precise value of the dietetic use of alcoholics, can only be made by a collection of a large number of facts carefully and scientifically observed, for which we have not as yet sufficient trustworthy materials.

Let us now examine the use of alcoholics in feeble health and in disease, in which they may be regarded as stimulants, tonics, depressants, anæsthetics, narcotics, and arresters of decomposition. The practice of the late Dr. Todd did much to make the use of large quantities of alcohol fashionable in the treatment of disease; for, though his plan was not to use them indiscriminately, yet he is generally considered as having done so. Of late there has been a considerable reaction against this plan of treatment, so that more moderate doses are now given. There is even at the pre-

sent time a great difference of opinion amongst the profession as to the quantities used, especially at our public institutions. At St. Thomas's Hospital the patients cost annually £826, or 1s. 7½d. per head weekly; at the Sheffield Infirmary, 1s. 4½d.; at Leeds, Newcastle-on-Tyne, and Manchester, 1s. 1d.; at Glasgow, 8¾d.; at Edinburgh, 8d.; at Birmingham, 5½d. At the Newcastle Infirmary the amount has been diminished to the extent of £90 during the last year. In the county asylums for the insane poor there is a great diversity in the amount of wine, spirits, and porter consumed, beer being included amongst provisions. At the Asylums for Lancaster, Dorset, Notts, and Warwick, the weekly cost is ½d. per head; at Worcester, 4½d.; at Durham, 6d.; whilst at the borough asylums at Leicester and Norwich it is 7d. and 9¾d. respectively. The total cost for the maintenance of each patient varies only from 6s. 10d. in Dorset, to 10s. 6d. in Surrey, per week, but it is more in the borough asylums. From the official reports I cannot find that the recoveries or the deaths bear any reference to these expenses. At the Cumberland Asylum no beer is given as an article of diet, and the patients appear as well off as those in other asylums. To invalids, however, stimulants are given in the usual manner, as the cost per head appears to be 2¾d. weekly. At the various workhouses the same irregularity prevails. The 825 inmates of the Whitechapel Workhouse cost £503, or 2¾d. per head weekly; Shoreditch and Bethnal Green pay 3½d. each, the City of London, 6d.; Camberwell, 7½d.; whilst Paddington pays 9d. The comparison of the number of deaths with the supply of alcoholics affords no correct information as to their value, but it certainly does not prove anything in their favour. On what principle is there this difference in practice amongst the hospitals, asylums, and workhouses of this country? Surely none; and yet hundreds of pounds are spent every year, and no one can say to what good, if we look at the

results. Almost every man will tell you that he is guided by experience; but when so many different experiences exist, who shall decide which is best?

The stimulating property of alcohol is well marked; and no one will deny its use in a depressed state of the system, when a sudden effect has to be produced. Its continuance requires care, for it produces depression of temperature, and for this reason it is thought to be useful in fevers. As a tonic, it is supposed to assist in promoting digestion and in giving strength to the system, but no one can say exactly how. If it be burnt in the body, it ought to keep up the animal heat; but its invariable effect is to lower the heat, and for this reason it is forbidden to be used by arctic voyagers. In larger doses than are required to produce stimulant effects, alcohol is an anæsthetic, diminishing sensibility; and for this purpose it is used for relief of pain, much more frequently being prescribed at home than by the medical man. As a narcotic, it is also chiefly a domestic remedy. Its power of arresting decomposition in the body is doubtful, though out of the body its effect is well known.

No class of diseases has experienced greater change of treatment than fevers, in relation to alcoholics. Not many years ago it was the custom to give alcohol indiscriminately in large doses. Twenty years ago, when suffering myself from a severe attack of typhus, I was dosed with large quantities of alcohol, to the extent of one bottle of port wine and one pint of brandy every twenty-four hours for at least a week, and smaller quantities for several more weeks. Whether owing to the alcohol, or in spite of it, I made a good recovery. The pulse became slower, and I can only come to the conclusion that the alcohol was taken up so eagerly by the system, that it was oxidised and supplied the elements necessary for life until food could be taken in sufficient quantities. There were no symptoms of intoxication produced, although at the time I was a total abstainer, and the coma

came on before these large doses were given. I have never prescribed it in such large quantities myself—not even whilst I was physician to the Newcastle-on-Tyne Fever Hospital, when 400 cases were treated in one year. The practice which I followed then was to give no alcohol in mild cases, and in young persons under 20 or 21 years of age, unless there were special symptoms requiring it. In more severe cases I gave four, six, or eight ounces of wine daily, and seldom more than that quantity, or its equivalent, in the form of spirit. On the whole the cases did well, and I had no reason to regret the treatment in comparison with that of other hospitals. Dr. Gairdner, of Glasgow, has carried out the moderate use of alcohol in fever, and found it to answer best after trying to do without it. The same was the case with Dr. Murchison at the London Fever Hospital, and with the same results.

The connection with insanity and nervous disorders would require a paper itself. It is one of the most frequent causes of the breaking up of those delicate nerve-cells, on the integrity of which depends the *mens sana in corpore sano*. If the homœopathic doctrines were true, alcoholics ought to be largely used in insanity; for, having produced the disease, they ought also to cure it. This was at one time closely acted upon in the treatment of delirium tremens. To leave off the accustomed stimulant was sure to bring on the complaint, and when brought on it must be cured by the same means by which it had been caused. There is no greater fallacy than this; and I have treated many cases of delirium tremens without any stimulant, soothing the patient with a warm bath and an anodyne, allowing at the utmost a nightcap of hot spirit and water, where it was difficult to do without it. Even this is unnecessary, and chloral, judiciously used, will answer far better than any quantity of alcohol; besides, in such cases, moral treatment is of great importance, and it is best to begin by teaching the patient to do entirely without his accustomed stimulant. Total absti-

nence becomes the only practical way to cure the patient and keep him well. In other forms of nervous disorder, there is no special treatment required, except that many insane patients cannot bear much alcohol, being readily influenced by it.

At the present time many eminent surgeons dispense with the use of alcohol before a surgical operation, once a very common plan; and chloroform does duty far better. In diseases where there is much waste by suppuration, it has been the custom to give large quantities of porter and wine, when the same amount of milk would, at least on theoretical grounds, afford more support to the system.

The most important movement which has recently been made has been the "medical declaration respecting alcohol," which, in a very short time, obtained the signatures of 269 London and provincial physicians and surgeons of eminence. Though a step in the right direction, originating with leading members of the Association, it has not been generally approved of by the profession. The *Edinburgh Medical Journal*, the *Pall Mall Gazette*, and other papers and periodicals, were in favour of it, and it was speedily published in almost every newspaper in the kingdom. The medical men of Cheltenham supported it with some important verbal alterations. The North Staffordshire Medical Society considers the first paragraph of the declaration as being "an exaggeration and undeserved slur upon the whole profession," and does not approve of medical declarations issued to the public. The Islington Medical Society protests against the declaration, and does not agree with its censure upon the profession. The Northern Branch of the British Medical Association considers the first paragraph objectionable, but that the time had gone by for making any alteration. From the paragraph alluded to, it would appear that the prescriptions of medical men are to blame for a large amount of drunkenness. I propose, instead of the objectionable sentence, to substitute one which is not only more correct, but

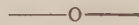
more in harmony with the opinion of the profession. In place of the preamble of the original declaration, which runs thus, "As it is believed that the inconsiderate prescription of large quantities of alcoholic liquids by medical men for their patients has given rise, in many instances, to the formation of intemperate habits, the undersigned, while unable to abandon the use of alcohol in the treatment of certain cases of disease, are yet of opinion that no medical practitioner should prescribe it without a sense of grave responsibility," I would substitute the following:—"The undersigned have paid much attention to the use of alcohol in health and disease, and, whilst they admit its value as a remedial agent, they are satisfied that a large amount of mortality, disease, and suffering, is produced by the immoderate use of alcoholic liquors." With such an alteration, I believe larger numbers of our profession would have signed the declaration.

I cannot conclude this paper without expressing a hope that the scientific and rational elucidation of this important subject has really com-

menced. Both in the literature of the day, and in the action which is taking place on the part of the non-medical public, the use of alcohol has become a prominent question. The recent declaration has shown that leading members of the profession have thought it necessary to take some steps to vindicate themselves from the charge of indifference. The whole question would be a very desirable one for a committee of members of the Association to examine carefully. The important points for them to consider would be the following:—

1. Is alcohol food or medicine, or both?
2. Is it necessary in ordinary health, or is it injurious?
3. For what definite objects can it be recommended in feeble health and disease?
4. What is its mode of action?

Let us not be led away by prejudice or custom, but manfully grapple with what is really the most important medical and social question of the day, and be true leaders in the scientific education and moral advancement of the people.



## EFFECTS OF ALCOHOL ON TRADERS IN LIQUOR.

At the Royal Medical and Chirurgical Society, on Tuesday, October 22nd, T. B. Curling, Esq., F.R.S., President, in the chair, a paper "On the morbid effects of alcohol as shown in persons who trade in liquor," was read by W. H. Dickinson, M.D. Cantab., F.R.C.P., Senior Assistant-Physician and Lecturer on Pathology, St. George's Hospital.

The paper is a contribution to the morbid anatomy of alcoholism founded upon a comparison of post-mortem appearances between persons trading in liquor and persons occupied independently of it, and not known to have been drunken. The assumption that people who get liquor for nothing drink more than those who have to pay for

it, is, the author said, justified by the common tendency of mankind, as well as by the notorious inebriety and liability to delirium tremens of potmen, waiters, cellarmen, draymen, brewers, barmen, and publicans—the chief members of the liquor-trading class. The paper is based upon an analysis of the post-mortem and case books of St. George's Hospital for a period of thirty years. This comprised the particulars of the examination of the bodies of 149 traders in liquor. For comparison, there were taken from the same source the same number of examinations of persons otherwise and very variously employed, chosen by rule so as to afford a fair standard. The full details were tabulated and

laid before the Society. Tabular abstracts, representing the condition of each organ in the two classes, were incorporated in the paper.

The two classes were first compared with reference to the distribution of indoor and of outdoor occupations, in order to ascertain how far any morbid differences might be due to a different measure of exposure to weather. The result was that of the alcoholic traders four to three, of the non-alcoholic three to four, worked indoors; no great disparity.

A comparison of the ages at which the members of each class died showed that to trade in liquor cost  $3\frac{1}{2}$  years of life; the alcoholic trader dying on an average at the age of 36·8 years, the non-alcoholic at 40·6 years; the shortness of life on both sides being partly due to the calculations referring only to hospital patients.

The morbid changes belonging to the two series were then considered in detail, the organs being taken in the order in which they would be reached by a fluid absorbed by the veins of the stomach.

Passing over the stomach, the changes in which are not always evident to rough morbid anatomy, it was shown, with regard to the liver, that in the alcoholic series was a great and unmistakable increase of cirrhosis, which disease was found in twenty-two persons of the alcoholic, to eight of the non-alcoholic series; the liability to cirrhosis being thus nearly trebled by a liquorous pursuit. Fatty degeneration was also increased.

In the lung, pneumonia proved to be rather less frequent with the alcoholic, but empyema, as distinguished from simple pleurisy, belonged especially to the alcoholic series. The most important conclusion related to tubercle, which in every shape was most frequent in the alcoholic traders. As the relation between alcohol and tubercle has been the subject of some difference of opinion, it was shown in detail that under alcohol every kind of disease of the lung to which the term tubercular could be applied was increased. The increase, however, was greatest where the disease was cer-

tified as truly tubercular by the concurrence of disease of the same kind in other organs. This multiple form of the disease affected thirty persons of the alcoholic series, nineteen of the non-alcoholic. Tubercle, including all kinds, affected the lungs in sixty-one persons of the alcoholic, to forty-four of the non-alcoholic class. It was further shown that in each of the following organs—the brain, the liver, the kidneys, the spleen, bowels, mesenteric glands, and peritoneum, tubercle was at least twice as common in the alcoholic as in the non-alcoholic category. The conclusion is inevitable that alcohol engenders tubercle.

As to the heart and arteries, atheroma and fatty degeneration were found most numerous in the alcoholic series; endocarditis and pericarditis in the non-alcoholic. With regard to pericarditis, though less frequent under the influence of drink, it was more often suppurative, following the same rule as pleurisy. Hypertrophy of the left ventricle, unconnected with valvular or aortic change, dependent therefore upon minute arterial change, such as is often associated with granular degeneration, was also most frequent in the alcoholic series, and its excess was greater than could be explained by the increase of renal disease.

The brain in the alcoholic class displayed a marked preponderance of inflammatory affections of every kind, and of hæmorrhages. Under the same influence there was also a decided excess of such accumulations of watery fluid as indicate that an atrophic process has taken place in the cerebral substance.

Next were considered the morbid results of accidents and injuries in the two classes. It was found that in the alcoholic class the power of healing was weakened and processes of repair rendered slow and unsafe by liability to diffuse cellulitis, and, in general terms, by the substitution of purulent and non-adhesive products, apt to spread and disseminate, for those of the adhesive and circumscribing sort.

Lastly were considered the kidneys, which have been credited with a

morbid susceptibility to alcohol much in excess of what is warranted by facts. These organs were described as natural, or presenting no change beyond simple congestion, in almost exactly the same number of cases in the two series. Tangible renal changes were noted in eighty-two persons on the alcoholic side, in eighty-three on the non-alcoholic. Thus, if one kind of renal change is encouraged by an alcoholic pursuit, others are to some extent diminished, so that the total is unchanged. Under alcohol the most marked excess was in the number of kidneys described as enlarged, coarse, and congested. Lardaceous disease, possibly in connection with the fewer accidents among the traders in liquor, and also the large white kidney of tubal inflammation, occurred most often in the non-alcoholic list. With regard to the intertubal or fibroid change, this occurred as granulations in thirty-one of the alcoholic to twenty-seven of the non-alcoholic category. This slight preponderance under alcohol of the granular kidney was accompanied by a more than proportionate prevalence of vascular disease, as evinced by apoplexy and simple hypertrophy of the heart. Thus, under alcohol, acute, active, and obvious forms of renal disease were partially replaced by the chronic, insidious, and latent. With liquor was a smaller amount of dropsy and of discovered albuminuria, and a smaller number of deaths directly attributable to renal disease, but a larger amount of cerebral uræmia, apoplexy, and cardiac change. From the information comprised in the tables, to which was superadded a comparison of the condition of the kidneys in fifty-eight persons who had died with delirium tremens, and the same number who were killed by accident, without that complication, it was inferred—firstly, that alcohol has no effect in causing lardaceous disease; secondly, that it promotes granular degeneration, though not to an extent commensurate with the arterial change; thirdly, that the frequency of active nephritis is not increased by alcohol, though fatty and other latent tubal disturbances often result from

this agent; lastly, that the kidneys are, on the whole, affected less injuriously by liquor than are the liver, the lungs, the bloodvessels, and the nervous system.

The general conclusions of the inquiry were thus summed up:—

“Alcohol causes fatty infiltration and fibroid encroachment; it engenders tubercle, encourages suppuration, and retards healing; it produces untimely atheroma, invites hæmorrhage, and anticipates age. The most constant fatty change, replacement by oil of the material of epithelial cells and muscular fibres, though probably nearly universal, is most noticeable in the liver, the heart, and the kidney. The fibroid increase occurs about the vascular channels and superficial investments of the viscera, where it causes atrophy, cirrhosis, and granulation. Of this change the liver has the largest share; the lungs are often similarly but less simply affected, the change being variously complicated with, or simulative of, tubercle; the kidneys suffer in a more remote degree. Alcohol also causes vascular deteriorations which are akin both to the fatty and the fibroid. Besides tangible atheroma there are minute changes in the arterial walls, which show themselves by cardiac hypertrophy and cerebral hæmorrhage. Drink causes tuberculosis, which is evident not only in the lung but in every amenable organ. Drink promotes the suppurative at the expense of the adhesive process, as seen in the results of pneumonia, of serous inflammations, and of accidental injuries. Descending from general conditions to the individual organs, the effect of alcohol upon the nervous system must be looked upon as special, and taken by itself. Apart from changes which, like delirium tremens, are more evident during life than after death, the brain pays a large reckoning in the shape of inflammation, atrophy, and hæmorrhage. With regard to the other organs, they are damaged by alcohol much as they stand in its line of absorption. Next to the stomach the liver suffers, by way of cirrhosis and fatty impregnation. Next the stress

falls upon the lung, taking every shape of phthisis. A large share in the pathology of intemperance is also taken by the arterial system, as seen in its results—atheroma, cardiac hypertrophy, and hæmorrhage. Lastly, the kidneys, more remotely exposed, have a smaller participation in the common damage of alcoholism. They undergo congestive enlargement, fatty and fibroid change, but they do not suffer commensurately with the bloodvessels, or as frequently as the other viscera.

“So far we have seen only the ill which alcohol produces. It may be asked, Is there none which it obviates? Apart from its medicinal action, which the evidence before us does not touch, has it no *per contra* prevention? It is not easy to answer this inquiry. Some active inflammations, such as pneumonia and endocarditis, are diminished in the alcoholic trades; but it must at once be seen that the increase of the alcoholic disorders must necessarily cause an apparent diminution in all which are unaffected by this agent. A man may be saved from pneumonia or acute rheumatism, not because alcohol is antagonistic, but because it kills him prematurely in another way. He can die but once. Therefore, though under alcohol some forms of disease are comparatively infrequent, we must use much caution in concluding that it has a directly preventive influence. Nevertheless, it may be laid down as an axiom that any drug which can do harm can do good. Disease is most various, and may, or rather *must*, represent contrary conditions. It may be positive or negative, plus or minus. Too much or too little of any of the shapes of heat, food, and work, may spoil the equipoise of health. If a drug promotes one change, it may prevent its opposite. Alcohol certainly gives an asthenic type to disease. Although we cannot as yet say that it defibrinates, yet it retards adhesive and plastic processes. This influence may be beneficent if it hinders the development of acute inflammation, and obviates the formation of coagula where, as in acute rheumatism, the process is harmful. It is possible that

by some such antagonism we may explain the remarkable paucity of endocarditis in the alcoholic series. But, at the best, the protecting is less certain and less effective than the deteriorating influence. In brief and final enumeration, alcohol replaces more actively vital materials by fat and fibrous tissue; it substitutes suppuration for new growth; it promotes caseous and earthy change; it helps time to produce the effects of age; and, in a word, is the genius of degeneration.”

Dr. ANSTIE said that the paper contained facts of high interest, but which required consideration as to how far the number of cases warranted the conclusions; those cases only having been included where alcohol had been taken in excess, and thus a large number of persons subject to chronic alcoholism have been included. He did not agree with the conclusion as to the suppurative form of inflammation being the more common. With regard to the frequency of cirrhosis, Dr. Anstie would say, from his experience of over thirteen years, in which he had seen a large number of patients suffering from the effects of chronic alcoholism, that it was rarely met with; he had only seen thirteen cases in which there were symptoms of cirrhosis, though some of the patients had been under observation for ten years. He agreed with the prominence given to nervous change and symptoms; they were always in advance in the effects of alcohol. It was interesting to note how frequently inflammatory changes, such as slight attacks of inflammation of the brain, occurred, delirium and convulsions, and from which the patient recovered. He thought the effects of alcohol, long continued, tended to the fibroid form of phthisis. He was pleased to see that the tables showed that kidney disease on a large scale was not increased by alcohol; this had been shown by statistics collected in Glasgow. He believed the notion arose from false ideas of the elimination of alcohol by the kidneys—too much work was thrown upon them, so causing degeneration.

Mr. SAVORY observed that the abuse of alcohol appeared to shorten life by about three years and a half. Might there not be an error through not comparing the number of patients in hospital and the mortality with that of the whole population?

Mr. POWER drew attention to a form of disease attending spirit-drinking—namely, atrophy of the optic nerve; patients came complaining of dimness of sight, and on an examination a whiteness of the optic discs from nerve declension was observed. This condition was relieved by abstaining from alcohol, and taking strychnine and iron.

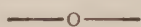
Dr. GREEN said that the nature of the change appeared to be a fibroid degeneration, a chronic inflammation of the various organs. He thought the difference of opinion as to the frequency of cirrhosis of the liver was owing to the different sense in which the word was used—Dr. Dickinson applying to what was observed at the post-mortem examination, Dr. Anstie to clinical observation. Often the fibroid tissue was found increased at the autopsy, whilst no symptoms had been observed during life.

Dr. SYMES THOMPSON said the fact that suppurative pericarditis and purulent pleuritic effusions were common

in spirit-drinking was of importance in diagnosis. It was often difficult to decide whether pus or serous fluid were present, but the knowledge that the patient was given to drinking would determine an early operation. Whether pneumonic change was frequent or not from the abuse of alcohol, all agreed that chronic lung disease often occurred, and the chronicity was due to the fibroid change.

Dr. ANSTIE observed that suppurative pleurisy was most common in children.

Dr. DICKINSON, in reply, said he regretted the fewness of the cases, and wished they were more numerous; still they extended over thirty years. The paper was based upon post-mortem observations, which he considered more valuable than clinical observations. He was aware that suppurative pleurisy occurred in children, but drinking caused it in adults. In his tables there was no case of empyema, except on the alcohol side, in which series there was also a tendency to suppuration in other organs—pericardium, &c.—and from injuries. He thought it would have been better to take the proportion of patients in hospital to the population, and thus an error may possibly have occurred. —*Lancet*, Nov. 2, 1872.



## ALCOHOL AS A CAUSE OF RENAL DISEASE.

By W. H. DICKINSON, M.D. *Cantab.*, F.R.C.P., Senior Assistant-Physician and Lecturer on Pathology, St. George's Hospital; Physician to the Hospital for Sick Children.

IN my work on *Albuminuria*, I ventured to bring forward some facts which seemed to show almost conclusively that alcohol is not so prolific a source of renal disease as has been thought. The degree, indeed, to which disease of this nature has been attributed to drink is so extravagant as to carry its own refutation. It was said by a distinguished northern physician—and the saying has been often approvingly quoted—that in Edinburgh three-fourths, or even four-fifths, of the

cases of granular degeneration could be traced to intemperance. And Dr. Roberts, who follows on the same side, though less numerical, is still, as I think, extravagant in saying, "The abuse of spirituous liquors ranks high—probably higher than any other single circumstance—as a determining cause of Bright's disease."

The tracing of disease to its cause is not always easy. It does not follow that, if a man who drinks whisky become diseased, therefore the whisky

has caused the disease. A widespread habit must continually coincide with a widespread disease, unless the habit and the disease be incompatible. The *post hoc, propter hoc* delusion, or, in Hippocratic phrase, *the fallacy of experience*, is never more dangerous than in such a case as this. The habit has justly an ill name, and is apt to be wrongfully blamed. Because much drinking injures health, we are prone to attribute to it any disorder to which it has been antecedent. Hence it is necessary, with more than ordinary strictness, to balance and compare. We must measure the drunken against the sober, all circumstances but drink being the same. To find the effect of alcohol upon the kidneys, we must look not only at the frequency of renal disease among British drunkards, but also have regard to the amount of the disorder which in this climate is inevitable, or due to causes other than drink.

Thus cautious, and trusting chiefly to *post mortem* evidence, as excluding clinical oversight and diagnostic error, I proceeded to examine the question. I found that persons who had died with delirium tremens had scarcely more renal disease than others, similar in sex, age, and station, but not known to have been intemperate, who were accidentally killed. Referring to the experience of Dr. Peters, of New York, and Dr. Ogston, of Aberdeen, both of whom had especially investigated the morbid anatomy of drunkards, I found that they had observed in these persons an amount of renal disease which, though looking considerable when taken by itself, was not very much greater than is usually found in as many *post mortem* examinations of the temperate. With these direct observations, I next appealed to the Registrar-General's reports, and showed that in general terms there was no relation between drunkenness (as measured by deaths from delirium tremens and alcoholism) and renal disease. Many died of renal disease in places where few died of drink; and conversely, it often happened that where many died of drink, few died of renal disease. Thence, and from

other evidence, which need not be restated, I formed the following conclusions:—

“— The use of alcoholic drinks is comparatively inoperative as causing disease of the kidney.

“Such fluids, when taken in great excess, may set up a state of renal catarrh; though, compared with other causes of tubal inflammation, this one is of rare operation, and almost insignificant in its numerical results.

“Certain liquors, by causing gout, may bring about granular degeneration, but this sequence is less common than when the gouty diathesis is connected with the absorption of lead.

“Granular degeneration may result from the extension to the kidney of a fibroid change, such as ardent spirit produces in organs more immediately exposed to its action—though this event is comparatively unfrequent, and the organic alteration, when it occurs, is generally less decided in the kidney than in the liver.

“But each of the issues which have been described is of rare occurrence. Alcohol attacks other structures in preference to the kidneys. As causes of renal disease, there are other agents which are greatly more mischievous; and there is a great atmospheric power which overshadows all the other circumstances which tend to produce renal inflammation or granular change.”

Dr. William Roberts, of Manchester, than whom there is no one whose opinions on such a subject are more deserving of consideration, made these views the subject of attack in the *British Medical Journal* last November. He will have none of them. As for the kidneys, they shall not be excused; excuses shall not avail; not even in a small measure shall the old estimate of their susceptibility be lessened. The statements which I have made are so fallacious, or the reasoning so unsound, that, as Dr. Roberts says, “they are inadequate to disturb the old opinion respecting the effect of alcohol on the kidneys; and, in fact, the question remains just where it was before he” (*i.e.* myself) “wrote his article.” Thus I have

spent my labour in vain ; it not only falls short, but goes for nothing—a discouraging result, if result it may be called—one which, though not unknown as regards criticism, is uncommon as the issue of the collection of facts, always supposing it to have been done in good faith. However, the respect which I entertain for Dr. Roberts is such that I would not hastily conclude him to be in error. When his remarks appeared, I was

engaged upon a revision of the whole subject, in view to a forthcoming edition of my work, and I have postponed discussion until inquiries then pending were completed. I am now in a condition to resume the topic with the help of his strictures, and with a sense that, if I have gone wrong, there is no one more capable than himself of putting me right. I will first notice Dr. Roberts's criticisms.

Condition of Kidneys.				
Natural	...	...	...	...
Congested	...	...	...	...
Slight or uncertain change in cortex	...	...	...	...
Large, smooth, mottled	...	...	...	...
Granular surfaces	...	...	...	...
Cysts, without other change	...	...	...	...

Delirium Tremens :		Accident :	
52 Cases.		52 Cases.	
Average Age, 38.		Average Age, 41.	
...	28	...	32
...	14	...	5
...	3	...	1
...	3	...	1
...	3	...	6
...	1	...	7

Comparing, in the table which is here reproduced, the state of the kidneys as found after death with delirium tremens and from uncomplicated accident, a slight excess only of renal disease appeared on the inebriate side. Upon this, Dr. Roberts announces himself struck, not by "the slightness of the alterations in the delirium tremens cases, but by the enormous proportion of serious organic disease in the accident cases;" and he adds: "If the delirium tremens cases be taken by themselves, they present a sufficiently strong indication of the evil effects of alcohol upon the kidneys." What, to me, is more striking than anything else, is that Dr. Roberts should use such arguments. To take the delirium tremens cases by themselves is precisely what I decline to do. Comparison is the gist of the argument. Take the drunken cases alone, assign all their diseases to drink, and the indication of the evil effects of alcohol may well be called sufficiently strong. And thus, making no allowance for other morbid influences, we cannot fail, with Dr. Roberts, to be struck at the amount of renal disease among presumably temperate English adults. An insufficient allowance, indeed, for the amount of disease of this kind, which in this climate is inevitable, appears to lie

at the bottom of Dr. Roberts's estimate.

In the series of fifty-two presumably healthy men accidentally killed, occurred one instance of the large, smooth, mottled kidney, and six in which the kidneys had granular surfaces—a proportion of disease more astonishing to Dr. Roberts than to me. He asks, "Is it to be believed that one in every seven or eight presumably healthy persons of the average age of forty-one is the subject of the granular kidney or of the large, smooth, mottled kidney? This point alone would seem sufficient to fatally vitiate these observations." But is he not unconsciously testing pathological observations by clinical experience, forgetful that many or even most of the changes would make no sign during life? Many a smooth countenance goes with a very rough kidney. A perfectly healthy kidney, save in a child, is almost as rare as a clear conscience.

Since the table in question was compiled, in 1865, twenty-five adult males, accidentally killed, have been examined in St. George's Hospital. Their average age was forty. The kidneys are thus described: natural, 13; congested, 3; having slight or uncertain changes in cortex, 4; large, smooth, mottled, 0; with granular surfaces, 5; cysts without other

change, o; a proportion of disease fully as great as in the list which is the subject of comment. Granulation, it will be noticed, was found in a fifth; and I believe it is not too much to suppose that of average Englishmen, aged forty, at least one in seven carries a kidney, the state of which he would regard with much dissatisfaction, could *clairvoyance* show it him and pathology explain.

Looking more widely, I ascertained that among 2,350 *post mortem* examinations at St. George's, covering a period of ten years, including both sexes and all ages without exception of any kind, comprising, therefore, many children, the kidneys were granular in 250; large, smooth, and mottled or highly congested in 107; thus about one-seventh being the subject of serious disease.

From all the evidence, therefore, I cannot but regard Dr. Roberts's surprise at the amount of disease on the non-alcoholic side of the comparison, as based on misconception, and insist on the justice of the comparison on which I have founded this part of the argument.

The same estimate, which I think I have shown to be insufficient, of the amount of renal disease inevitable in this country, has led Dr. Roberts to look with what I venture to call an exaggerated regard at the frequency of this disease in the bodies of drunkards, as related by Dr. Ogston of Aberdeen, and Dr. Peters of New York. Upon this point I need say no more, save to allude to a remark of Dr. Roberts which I scarcely understand. He says that, in considering the changes recorded by these authors, as found in the bodies of drunkards, "I seem to have been unconsciously biassed by my individual views of the types of renal disease." It is true that I condensed and arranged the descriptions of disease for the sake of necessary comparison, but I did not put them into scholastic divisions; and, if I had, the facts would have remained. It would be only shifting from one pocket to another, a process neither impoverishing nor the reverse.

I now pass to the last of Dr. Roberts's criticisms. I showed that, according to the reports of the Registrar-General, kidney-disease and alcoholism bear no constant relation; disease of this organ being often rare in drunken, and common in sober districts. Upon this, Dr. Roberts says: "My surprise was great to find that the conclusion of Dr. Dickinson was substantially correct; and that the death-rate from Bright's disease was as high in the more sober districts as in the more intemperate districts, and frequently much higher." I am well content to be so far confirmed by the testimony of an adversary. But Dr. Roberts then proceeds to show what, in my turn, at first astonished me: that the reports do not display any correspondence between drunkenness and liver-disease. Drink, as he says, undoubtedly is a frequent cause of cirrhosis; but the reports do not show it. By parity of argument, may not drink with equal frequency cause kidney-disease, though the reports do not show it?

As to the Registrar-General's reports, the average diagnostic ability which dictates the certificates of death upon which they are founded, does not warrant them as absolute truth. Sometimes an approximation may be reached by the counterbalancing of mis-statements; and now and then a very clear and evident fact may be visible, when one with a less definite outline is lost in obscurity. Albuminuria, as a sign of disease, is less liable to be mistaken than most others, whence the returns relating to the kidney may have a flavour of truth. But with other organs there is more guessing, and with none more than with the liver. The liver is the refuge for destitute diseases; to it are referred all disorders unclaimed by other organs, or which the information of the practitioner does not enable him to billet elsewhere. Diseases are assigned to the liver the most often by the most ignorant. Pneumonia, pleurisy, peritonitis, typhoid fever, tubercular meningitis, most general disorders, and many disorders localised in other organs, are not unfre-

quently attributed to this much maligned viscus, and treated through the portal system. Not long ago a woman was dug up with a mortal dose of arsenic in her stomach. According to the certificate, she had died of purging *and disease of the liver*.

Practically, therefore, I should not expect the returns of liver-disease to exhibit much correspondence with fact; and, on reflection, I cease to be astonished that Dr. Roberts has found them wanting in this respect. The kidney returns may be worth something more, though but little, as compared with pathological observations or even with the clinical experience of a credited observer.

To these remarks I will venture to add, in brief, the results of a further inquiry, in so far as it has to do with the kidney. The particulars were brought before a recent meeting of the

Royal Medical and Chirurgical Society, and the courtesy of the editor enables me to refer to them in the current number of the *Journal* (page 592). The morbid effects of alcohol were deduced from a comparison of the *post mortem* appearances of traders in liquor, potmen, publicans, draymen, &c., with those of persons not presumably drunken or conversant with gratuitous drink. In the alcoholic class the peculiarities were so marked and consistent through the organs, as to warrant the general accuracy of the demarcation. The *post mortem* appearances in 149 alcoholic and 149 non-alcoholic traders were compared. The state of the kidney in each individual in both series is stated in the table. Another table is appended, showing how often symptoms were observed pointing to the kidney.

*Analysis of the state of the Kidney, as found after death, in 149 persons following Alcoholic Trades, and in the same number of persons circumstanced otherwise.*

	Alcoholic.	Non-Alcoholic.
Natural ... ..	49	48
Congested ... ..	18	18
Enlarged and congested ... ..	0	5
Coarse ... ..	3	3
Large and coarse ... ..	4	1
Fatty ... ..	2	1
Large and fatty ... ..	3	3
Slight or uncertain change in cortex...	2	4
Large, smooth, mottled ... ..	5	9
Small, smooth, mottled (cortex shrunk)	1	2
Lardaceous ... ..	3	6
Slightly granular ... ..	10	11
Highly granular...	18	15
Granular + tubercles ... ..	1	0
Granular + cretaceous mass ... ..	0	1
Granular + pyelitis ... ..	1	0
Granular + stone in kidney ... ..	1	0
Cysts without other change ... ..	1	2
Cysts + depressions ... ..	3	1
Pyelitis ... ..	0	2
Scattered abscesses, with pyelitis ... ..	1	6
Pyæmic abscess...	1	1
Abscess, unexplained ... ..	1	0
Tubercles...	8	4
Tubercles + cysts ... ..	0	1
One converted into cretaceous mass ... ..	0	1
Cancer ... ..	1	1
Fibrinous blocks...	0	2
Stone without other change ... ..	2	1
	149	149

*Analysis of the Symptoms referred to Albuminuria among the 149 Alcoholic and 149 Non-Alcoholic Cases comprised in the preceding Table.\**

	Alcoholic.	Non-Alcoholic.
Prominent symptoms of renal disease ...	20	26
Renal œdema ... ..	14	18
Internal renal dropsy ... ..	4	6
Albuminuria discovered ... ..	23	29
Cerebral uræmia... ..	5	3
Death directly due to renal disease ... ..	10	14

It will be at once seen that the kidney in the two classes shows no great disparity—a disparity far less than is exhibited by other organs. The total of kidney-disease is not increased by the alcoholic trades. The uniform changes of cortex which tend to albuminuria were slightly, and but slightly, more frequent under liquor, occurring in 86 persons of the alcoholic to 82 of the opposite series. The most marked increase under alcohol was with kidneys described as enlarged and congested, or large and coarse, conditions often undeclared during life. Granulation was also increased, but not to the same extent as cirrhosis, its hepatic analogue. Associated with, but not entirely dependent upon, this increase, there was also under alcohol a marked preponderance of cerebral apoplexy and hypertrophy of the heart, results of vascular deterioration.

Under the same influence of alcoholic trade, the “large, smooth, mottled kidney” (a description which may refer either to advanced tubal nephritis or to lardaceous infiltration) was diminished, as also was the lardaceous change of a distinctly recognisable sort. Thus the more rapid and obvious forms of renal disorder were in abeyance. Such increase as occurred was insidious and latent—rather exposed after death than traceable during life. Dropsy, external or internal, discovered albuminuria, and death directly attributable to the kidneys, were less frequent with liquor

than without. Cerebral uræmia, the natural ending of granular degeneration, preponderated on the other side.

In deducing the effects of alcohol from this comparison, it is necessary to allow for the somewhat lessened exposure to weather, and also to accidental violence, involved in the alcoholic pursuits—exemptions which, so far as they go, would diminish the liability to tubal nephritis and to lardaceous change. This may help to explain the comparative rarity of these disorders with the alcoholic class. The increase in fibroid and chronic tubal changes must be referred to the liquor alone; but this increase is not great.

Taking all the facts together, I do not see how it can be doubted that the effects of alcohol in causing renal disease is less than used to be asserted: that, to paraphrase Dr. Roberts, if he will allow me to do so, this agent does not rank higher, but lower, than other circumstances—to wit, external temperature and the absorption of lead—as a determining cause of Bright’s disease. Although we can now and then trace the existence or aggravation of renal symptoms to intemperance, we do so with far less frequency than with disorders which have other sites. Pathological and clinical evidence combine to show that the evil influence tells more upon the nervous system, the liver, the bloodvessels, and probably in the production of tuberculosis, than upon the kidneys. The facts adduced are consistent with those formerly advanced, and with the quoted conclusions which have been the object of attack.—*British Medical Journal*, Nov. 23, 1872.

[Dr. Roberts’s paper was given in our issue for July, 1872.]

\* In this table are only included the symptoms assigned to Bright’s disease or albuminuria. Those of stone, tubercle, cancer, tumours, pyelitis, and abscesses, are omitted.

## THE MORBID EFFECTS OF ALCOHOL.

(From the *British Medical Journal*, Nov. 23, 1872.)

THIS subject is one of so great interest that we willingly devote a large part of our space this week to its consideration. We have had pleasure in postponing, at Dr. Dickinson's request, the publication of the abstract of his paper read at a recent meeting of the Royal Medical and Chirurgical Society, until he could prepare a further paper on the subject, which we also publish this week.

In the paper read at the Royal Medical and Chirurgical Society, an abstract of which, with the discussion thereon, will be found in another portion of our impression, Dr. Dickinson attempts to ascertain the influence of alcoholism upon various tissues and organs. With this object in view, he has tabulated the appearances found in the dead bodies of one hundred and forty-nine traders in liquor, the records extending over a period of thirty years. With these he compares the *post mortem* appearances in an equal number of persons who had not been traders in liquor, and who were "not known to have been drunken." "The assumption that people who get liquor for nothing, drink more than those who have to pay for it, is," the author says, "justified by the common tendency of mankind, as well as by the notorious inebriety and liability to delirium tremens of potmen, waiters, cellarmen, draymen, brewers, barmen, and publicans." We do not for a moment question the notorious inebriety of traders in liquor; but we demur to the assumption that the morbid appearances found in the dead bodies of all hospital patients who have not been engaged in the liquor traffic are certainly not the result of alcoholism. The author of the paper, dividing the subjects of his observation into traders in alcohol and non-traders in that commodity, assumes that, while those who manufacture, sell, and distribute liquors, drink to excess, the buyers of strong drink are abstemious and temperate; that, while

inebriety prevails behind the bar of the pothouse and the ginshop, sobriety is the rule in front of that boundary between the temperate and the intemperate. The assumption that, excepting known drunkards, temperance may be taken for granted amongst the entire population, would be sufficiently fallacious; but applied to the inmates of a general hospital, a large proportion of whom are notoriously brought thither by sickness the more or less direct result of intemperance, it is a palpable absurdity, and pathological conclusions based upon such data must be misleading and mischievous. Every hospital physician is aware that alcoholic excess is a fruitful source of disease amongst men of the most diverse occupations; and, if we would exclude the influence of this widely spread agency, we must be able to affirm, not merely that the subjects of our observation "were not known to have been drunken," but that they were known with absolute certainty not to have been drunken. Nay, more, if we would exactly determine the influence of alcohol in the causation of disease, a comparison should be made between those who habitually consume alcohol, whether in excess or in moderation, and those who are total abstainers from alcoholic liquors.

Dr. Dickinson's dead-house statistics have led him to the conclusion that "the kidneys have been credited with a morbid susceptibility to alcohol much in excess of what is warranted by facts." He finds evidence of kidney disease with about equal frequency in his two series of cases—in the bodies of those who have been traders in liquors, and in those who have been otherwise occupied. It should be distinctly understood that an ordinary *post mortem* record as to the appearance of the kidney affords no indication of the actual amount of disease. A kidney which, on a superficial examination, might pass for healthy, may reveal to a skilled microscopic observer extensive and advanced de-

generation. Accurate results are as unattainable by collecting together numerous inexact observations, as a prosperous insurance office by the amalgamation of several bankrupt companies. The result of such proceedings is to make confusion worse confounded.

The best field for observing the morbid effects of alcohol is neither the *post mortem* theatre nor the hospital ward, but the daily round of private practice, where, the reticence of the patient being supplemented by the candour of his friends, habits of intemperance can rarely be concealed from the medical attendant. If the author of this paper is anxious to determine the influence of alcohol as a cause of renal degeneration, we venture to suggest a method of investigation more trustworthy than that which he has adopted. Let him test the urine of five hundred men from thirty to fifty years of age, believing themselves to be in good health, and actively engaged in the liquor trade, or in the scarcely less perilous occupation of indoor servants in West End houses. Then let him take, for comparison, another series of five hundred men of the same ages and in about the same stratum of society—shopmen, porters, and others—who for five years at least have been total abstainers from alcohol. It might not, perhaps, be easy to find in this city, abounding as it does in gin-palaces, so large a number of Rechabites, and the inquiry would involve a considerable amount of trouble; but the results would be decisive; and we have no hesitation in declaring that they would show such a large preponderance of albuminuria amongst the tipplers as would lead to the irresistible conclusion that alcohol in excess is a most powerful agent in the production of kidney-disease. The generally accepted doctrine, that alcoholism is a fruitful source of renal disease, has been the result of extensive and careful clinical observation, and not, as Dr. Anstie is reported to have suggested, a deduction from erroneous theory.

It appears to us that Dr. Dickinson

must have undertaken the inquiry, the results of which we are now discussing, with a foregone conclusion. His theory is, that the "organs are damaged by alcohol much as they stand in the line of absorption." "Next to the stomach, the liver suffers by way of cirrhosis and fatty impregnation; next, the stress falls upon the lung. A large share in the pathology of intemperance is also taken by the arterial system. Lastly, the kidneys, more remotely exposed, have a smaller participation in the common danger of alcoholism." This theory has, at any rate, the advantage of mechanical simplicity; but it is certainly not in accordance with the facts set forth by its author. Obviously, if the theory be true, the stomach should be the organ most constantly and seriously injured by contact with imbibed alcohol; but apparently this is not shown in the dead-house, for we are told that, "passing over the stomach, the changes in which are not always evident to rough morbid anatomy," the liver was found to be most frequently and extensively diseased. In accordance with this theory of proximity to the place of absorption, the portal vein and its branches should suffer more than the liver itself; and, again, the hepatic veins, the inferior cava, and the pulmonary artery, ought to manifest more constant and advanced changes than the lungs and the aorta; and this, again, should be more frequently and seriously injured than the minute arteries. Yet the reverse of all this appears to have been found.

The asserted comparative immunity of the kidneys is explained by their remoteness along the line of absorption. An attempt to explain physiological facts upon purely mechanical principles scarcely calls for serious criticism. We would, however, suggest for Dr. Dickinson's consideration, whether the kidneys are not nearer to the point where alcohol enters the circulation than most of those portions of the vascular system which, according to him, are more extensively diseased—namely, the minute sys-

temic arteries. The pathologist who ignores physiological considerations, who pays no heed to the fact that the kidney is one of the main outlets for useless and noxious products, and who assumes that its liability to disease is influenced, not by its excretory function, but by its remoteness from the stomach, is not likely to throw much light upon renal pathology, or upon the relation between disease of the kidney and other pathological changes.

Another communication from Dr. Dickinson, on "Alcohol as a Cause of Renal Disease," which appears in our columns to-day, is a reply to a paper by Dr. Roberts, who may probably have something more to say on the subject. We have space only for a very few additional remarks.

The returns of the Registrar-General cannot be relied upon as an accurate index of the mortality from renal disease. If the habit of testing the urine for albumen were as general in private as it is in hospital practice, disease of the kidney would rarely escape detection. This, however, is far from being the case; and, consequently, unsuspected renal disease is the cause of many deaths which are registered under the head of apoplexy, paralysis, coma, convulsions, fever, pleurisy, pericarditis, pneumonia, &c. We agree with Dr. Roberts that the Registrar-General's reports cannot be

safely relied on to determine the more delicate etiological problems.

With reference to the comparison of the state of the kidneys in fifty-two cases of delirium tremens with that found in an equal number of men killed by accident, we would suggest two precautionary considerations. First, it cannot safely be assumed that men who suffer violent deaths are of temperate habits; on the contrary, it is certain that many fatal accidents are the direct result of intemperance. Then, with regard to delirium tremens, it is notorious that attacks of that disease are in a large proportion of cases the result, not of habitual, but of paroxysmal intemperance. For instance, we saw lately a man who was under treatment for a second attack of delirium tremens, the first having occurred seven years before. In the interval between the first attack and a period of about ten days before the second outbreak, this man had been a total abstainer from alcohol. If this second attack had been fatal, we certainly should not have found *post mortem* evidence of chronic alcoholism. The attempt to solve etiological problems by *post mortem* data, without a precise knowledge of the previous history of the subjects inspected, upon a mere presumption of what their habits may have been, can result only in confusion, disappointment, and failure.



## DR. DICKINSON'S REPLY TO THE *BRITISH MEDICAL JOURNAL*.

As the leader in last week's *Journal*, upon the morbid effects of alcohol, is pointedly directed against myself, I claim the right of reply. The writer, who apparently did not hear the paper, has commented in a manner which, even on the showing of the abstract, appears to me to be unjustifiable. He has misrepresented the purport of the argument and disregarded the stated limits of the inquiry. In comparing traders in liquor with persons otherwise employed and not

ostensibly drunken, I was careful to state that the inference that those who got liquor in the way of business for nothing took more of it than those who had to buy it, related to the general average. Among the 149 traders in drink may have been a teetotaler; some of the contrasted class may have been intemperate in spite of the care used to exclude such. But it can scarcely be doubted that the average of imbibition was greater on the side of gratuitous drink, and suffi-

ciently greater to give preponderance in the class where it was current to the diseases which drink engenders. The writer of the article admits the notorious inebriety of traders in liquor, but "demurs to the assumption that the morbid appearances found in the dead bodies of all hospital patients who have not been engaged in the liquor traffic are certainly not the result of alcoholism"; and describes as fallacious "the assumption that, excepting known drunkards, temperance may be taken for granted among the entire population." He is welcome to demur to such fallacies; they do not belong to me. As to persons not dealing with liquor or ostensibly drunken, my assumption is not that their diseases are invariably unconnected with drink, but that they are less often connected with drink than are the diseases of those who do so trade and are thus admittedly inebriate. The question is not between drink and no drink, or even between drunkenness and no drunkenness, but between more and less. All I assume is, that an average poor man who drinks at others' cost, will take more than another who drinks at his own. If the writer question this, and deny that there is more intemperance on one side than the other, let me ask why it is that with the drink-traders cirrhosis of the liver is more than twice as frequent as with the contrasted class. If there be no excess of drink on one side, the fundamental proposition of my paper falls to the ground. If the excess exist where I have placed it, and be such as to tell upon health, then not my conclusions, but his criticisms, must be described as "misleading and mischievous."

The article then proceeds to inform us that "an ordinary *post mortem* record as to the appearance of the kidney affords no indication of the actual amount of disease. A kidney, which on a superficial examination might pass for healthy, may reveal to a skilled microscopic observer extensive and advanced degeneration." Are we to infer from this that it is of no use looking at the kidney except through a microscope? Bright made

a few useful observations with the naked eye, an instrument, indeed, which is by no means without value in the detection of "extensive and advanced" renal changes. It needs no microscope to determine whether the kidney be twice or half its proper weight, or whether the surface be granular or the section that of a parsnip. The unassisted but practised eye, which though it does not scrutinise disjointed bricks comprehends the building, is a surer test for potential renal disease than the fragmentary microscopic examination which only is habitually practicable. And because we have not evidence of both kinds, shall we reject the more important?

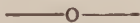
The writer is kind enough to suggest total abstainers as a standard of comparison—an idea sufficiently obvious to have occurred to myself. The number is to be five hundred. Will he place me under still further obligation by producing them? a process which he himself admits to be difficult. He must sternly exclude all broken drunkards from the immaculate array. An inquiry on this basis, however, though commended as likely to be instructive to myself, can convey no information to the writer of the article, since his far reaching knowledge enables him to forecast the results. Liberal with what has cost him nothing, he gives them to us. He has "no hesitation in declaring that they would show such a large preponderance of albuminuria amongst the tipplers, as would lead to the irresistible conclusion that alcohol in excess was a most powerful agent in the production of kidney-disease." He is among the prophets. Happy he to whom the results of an investigation are so manifest before it is begun, that he has no hesitation in declaring them!—an economy of labour desirable in busy times.

The writer objects to mechanical principles. In considering the organs in relation to stomach-absorption, I had to take them in some order. I might have placed them alphabetically or according to their distance from the centre of the earth, but it seemed more natural to refer to them accord-

ing to their position in the path of the influence in question. I argue nothing from this. It is sufficiently obvious that, if any alcohol be altered in the liver, it cannot get unaltered to the lung, and that what escapes with the breath does not afterwards enter the general circulation. These simple considerations, mechanical though they be, are enough to guide arrangement, and have been thus used by Trousseau. My statements, however, were not based upon any considerations whatever beyond simple inspection. I went by what was seen, not by what might have been expected. If the liver displayed a more unequal distribution of disease than the kidney, the matter was one not of theory but of observation. I necessarily excluded all considerations connected with physiology as apart from the design and basis of the inquiry. I limited my business to the exposure of the *post mortem* knife—appearances rather than theories, results rather than modes of action; not that I ignored the uses of physiological inquiry, but because I kept to the results of dissection, which it was the sole object of my paper to display. "The pathologist," says the article, "who ignores physiological considerations . . . . is not likely to throw much light upon renal pathology." I will rather say, the pathologist who in matters of simple observation does not ignore every-

thing else, is likely to allow what he sees to be warped by what he expects, and to fall into grievous error.

I will refer to one other criticism—not that it needs an answer, but in evidence of the animus of the article. In the paper, the portal and hepatic veins, the vena cava, and the pulmonary artery, were not considered, for the obvious reason that they were not examined. The paper was avowedly based upon *post mortem* examinations made without special object, and, it is scarcely necessary to add, without habitual examination of these structures; yet the eager critic affects to infer that, because no disease of these vessels was described, therefore none existed; and proceeds to argue accordingly against what he calls my theory. How often, let me ask him, has he seen, in a *post mortem* examination made without special object, the vena cava, the veins of the liver, and the arteries of the lung opened up? Considering the basis of the paper, the criticism is inappropriate, and, like the general style of the article, capitious rather than judicial. The whole article, indeed, savours of the bar rather than the bench, and speaks with the impassioned voice of a combatant, rather than in the balanced tones which should proceed from the serene sky of editorial wisdom.—*British Medical Journal*, Nov. 30.



### REJOINDER TO DR. DICKINSON BY THE BRITISH MEDICAL JOURNAL.

DR. DICKINSON'S rejoinder to our criticism of his papers on the morbid effects of alcohol suggests that our comments overstepped the limits of the inquiry. Of that, every one who has read his papers and our remarks can judge for himself, and we may direct our attention to a more momentous question. He believes that the influence of alcohol in the causation of renal disease has been greatly overestimated; and he considers that his comparison of the *post mortem* records

in two series of cases is confirmatory of his opinion. He finds the kidneys diseased with about equal frequency in the alcoholic and in what he calls the non-alcoholic series of *post mortem* examinations. From this he infers that the kidneys suffer less from alcoholic excess than is generally supposed. We, on the other hand, suspect that the consumption of alcohol may have been about equal in the two classes of cases. The assumption that, amongst hospital patients,

those who are not engaged in the liquor trade, and who are "not known to be drunkards," may be registered in a non-alcoholic series, is not warranted by the ordinary experience of the habits and diseases prevalent amongst hospital patients; and we therefore consider such data untrustworthy and fallacious. Dr. Dickinson asks how it happens that "cirrhosis of the liver is more than twice as frequent with the drink-traders as with the contrasted class." He should ask himself how it happens that in his non-alcoholic series there is any cirrhosis. Is not this cirrhosis conclusive evidence that drunkards have got admission into his "non-alcoholic" class? The morbid effects of alcohol are greatly influenced by the kind of liquor which is taken. Strong spirit more commonly causes cirrhosis of the liver; wines and malt liquors are more frequently associated with gout and kidney-disease. It may be that dealers in liquors, as a rule, consume more ardent spirit, while men of other trades and occupations are relatively more addicted to excess of wine and beer; but all this is matter of speculation. And in this inquiry there is no necessity nor any good excuse for having recourse to untrustworthy assumption, since in the presence or absence of albuminuria we have, for all practical purposes, conclusive evidence of the existence or absence of serious disease of the kidney.

In reply to the suggestion that he should pursue his inquiry amongst the living, rather than waste valuable time in supplementing imperfect *post mortem* records by unwarrantable assumptions as to the habits of life which have left their marks on the dead body, Dr. Dickinson intimates that we are among the prophets, and that we are declaring the results of an investigation not yet begun. Here he is in error. We are cognisant of a long investigation of the kind, and have more than prophetic grounds for recommending him to adopt a course of inquiry which is based upon facts, in preference to one which rests upon hypothesis. His industry and ability will, we are persuaded, be then re-

warded by more secure results. In declaring what would be the result of a comparison of the amount of albuminuria amongst drunkards and teetotalers, neither more nor less of prophecy is involved than there would be in the statement that nitric acid dropped into albuminous urine will cause a white precipitate. The influence of intemperance in causing albuminuria is as much a matter of daily experience amongst those who have large opportunities of clinically investigating this class of diseases, as is the effect of any other well-known morbid disease.

Dr. Dickinson denies the importation of theoretical considerations into his statement that "the organs are damaged by alcohol much as they stand in the line of absorption;" yet it is manifest that he has been so influenced by the theory that remoteness from the point at which the poison enters the circulation has a protective influence that, finding the kidneys, as he believes, less frequently injured than the small arteries, he erroneously assumes that "they are more remotely exposed;" whereas it is obvious that the kidneys are nearer to the part of the vascular system where alcohol enters the circulation, than most of the terminal systemic arteries can possibly be.

As to the question of proximity, an error is involved in the apparent assumption that, when alcohol has once reached the systemic capillaries, it ceases to exist as alcohol. It may be looked upon as certain that a large portion of the alcohol which has been taken up from the stomach passes the round of the circulation again and again, until it gradually disappears, partly, perhaps, by being decomposed, and partly by elimination. If this doctrine be true, then it follows that the amount of alcohol which reaches the tissues of a given organ—the kidney, for instance—and the amount of injury inflicted, depend, not upon the nearness to or remoteness from the portal vessels, but upon the degree of affinity which exists between alcohol and the secreting cells of the gland.

Obviously, then, the interesting

question which we have been discussing is one which is inseparably bound up with physiological considerations, and one not to be solved by mensuration. The problem is one of great interest. We are all deeply interested in studying the morbid effects of alcohol

clinically and by *post mortem* records; but the inquiry needs to be rigorous and free from fallacies. It is a great mistake to suppose that, by massing unauthenticated data, authentic conclusions can be obtained.—*British Medical Journal*, Dec. 7.



## ALCOHOL AS A CAUSE OF BRIGHT'S DISEASE; AND DR. DICKINSON'S STATISTICS.

By W. ROBERTS, M.D., F.R.C.P., Physician to the Manchester Royal Infirmary.

IN a previous paper, I pointed out that Dr. Dickinson's attempt to prove from the Registrar-General's Reports that renal disease was not casually connected with intemperance broke down on a closer investigation—that, in fact, by the same rule it might be proved that cirrhosis of the liver was unconnected with intemperance, which is a manifest fallacy. In his recent rejoinder to my criticism, he rests his argument mainly on the *post mortem* statistics of St. George's Hospital for a period of thirty years, which he has collected and compared with admirable industry. First, he compares the state of the kidneys in fifty-two persons who died of delirium tremens with that in fifty-two persons who died from accident, and who were presumably of sober habits. Secondly, he compares the kidneys and urine in a hundred and forty-nine persons who followed alcoholic trades with those of a hundred and forty-nine persons who followed other occupations. He finds in both series of cases that the total of renal disease was about as great in the presumably sober as in the presumably intemperate.

This conclusion is so opposed to the general opinion, and the statistics contain on the face of them some things so improbable, that I am sure Dr. Dickinson will not think me capricious if I subject them to a somewhat searching criticism. I believe I shall be able to show that they only cover a part of the ground occupied by alcohol as a producer of disease; and that, in

so far as they relate to the kidneys, they are misleading.

Before going further, it is desirable to define the exact scope of the controversy. It is not contended that alcohol has any important share in the production of the acute forms of Bright's disease, or of those chronic forms which begin acutely either as a result of scarlet fever or other acute disease, or of a sudden impression of cold, and which are associated with the large, smooth, white, or mottled kidney; but it is contended that alcohol is one of the most important factors in the production of those types of Bright's disease which are chronic from the beginning, and which are associated with the granular contracting or cirrhotic kidney.\*

The first thing to be remarked about these statistics is, that they contain no mention of gouty lesions; yet it cannot be denied that one of the commonest morbid effects of alcohol is gout, and that one of the not uncommon results of gout is a certain form of Bright's disease. Dr. Dickinson has felt this difficulty, and endeavours to turn it by the allegation that the "gouty kidney" generally occurs in saturnine gout. But this can hardly apply to the better classes, among whom the gouty kidney is common

\* I put out of view the "lardaceous" or "waxy" cases, because of their limited number, and their more obvious connection with chronic suppuration, joint-disease, and syphilis.

enough. Further, Dr. Garrod doubts if lead alone, without the help of alcohol, can produce gout.

In the next place, cases of chronic Bright's disease (non-gouty) with the symptoms of granular contracting kidney, are frequently actually met with in practice, in which no definite casual antecedent can be discovered, except the abuse of alcohol. These are generally middle-aged or elderly persons, most of whom have not been intemperate in the ordinary sense of the word, but who have been in the constant habit, for many years, of taking every day alcoholic drinks to some excess. Three such cases are at the present moment under my observation, all belonging to the easy classes, and about whom it could never perhaps be said that they had been palpably the "worse for liquor." It is also remarkable how often intemperate habits are mentioned among the antecedents of the cases of chronic Bright's disease recorded by authors—especially in this country. Of fifty-one cases related by Bright, Christison, George Johnson, Frerichs, and Grainger Stewart, no fewer than twenty-seven are reported as persons of intemperate habits. Dr. Dickinson thinks it a sufficient answer to this point, to say that intemperate habits are so common in this country, that this is a mere coincidence. But let him take another chronic disease, which also prevails largely in middle life and advancing years, namely, cancer, and he will find that clinical observers have not found any such coincidence. I believe that the chief reasons why these remoter effects of alcohol on the kidneys are not indicated on Dr. Dickinson's statistics are, first, that these statistics apply to comparatively young persons, who have drunk hard and killed themselves early, in whom, therefore, the later and slower effects of more moderate abuse of alcohol are not developed; secondly, that the granular kidney of chronic Bright's disease has not been sufficiently distinguished, by morbid anatomists, from granulation of the kidney induced by other morbid states.

The mean age of the cases tabula-

ted by Dr. Dickinson varied from 36·8 to 40·6 years; but the mean age of the victims of the granular kidney of Bright's disease is, according to the same authority, 50·2 years. Here is a difference of age of nearly a decade, which may fairly be assumed to have an important influence. But there is something more than the difference of age. These statistics do not really test the point at issue; they apply, on the alcoholic side, to what one may call the acute effects of alcohol to persons who, in ordinary parlance, would be called intemperate. In such persons are produced cirrhosis of the liver, alcoholic phthisis, early fatty changes, and delirium tremens. But there is another very considerable class of persons who ostensibly rank among the temperate—persons who never get drunk, who run little risk of cirrhosis or alcoholic phthisis, and none at all of delirium tremens. These persons imbibe daily a few glasses of spirits or wine, or a few pots of porter, more than is good for them. This goes on steadily for a long course of years, apparently without ill effects; but at length they become gouty, or the urine becomes albuminous, or their arteries become fatty ten years earlier than they would otherwise. Are these effects less real because they are produced more slowly? There has, I believe, been too little attention paid to the effects of the long-continued small excesses of alcoholic drinking, which do not, as hard drinking often does, rob a man of three-fourths or one-half his life, but which curtail his life by some ten or fifteen years.

Another source of error in these statistics is the excessive amount of renal disease credited to presumably healthy persons. Dr. Dickinson would have us believe that one in every seven presumably healthy persons, of the average age of forty-one, is affected with granular kidneys. If this is to be taken to mean that one-seventh of our presumably healthy population are the subjects of chronic Bright's disease—even in the incipient stage—the statement must involve some notable fallacy. Chronic Bright's

disease is not easily robbed of its victim. If this statement were true, or anything like true, Bright's disease ought to rank enormously high in our mortuary returns. But I find that all the types of renal disease only account for about one per cent. of the total mortality. But this point may be tested in another and more satisfactory manner—namely, by the examination of the urine of a number of presumably healthy persons. If the urine be free from albumen, and of normal quantity and specific gravity, it may be assumed—with only a very slight risk of error—that the producer of that urine is free from Bright's disease. I would suggest for this purpose the examination of the urine of the patients admitted into a general hospital for fractures and other injuries, which do not compromise the general health. I have made a small beginning of an investigation of this sort, but under less stringent conditions. My clinical clerks were instructed to examine the urine of all patients in the surgical wards of the Manchester Infirmary above the age of twenty years. Vesical cases were excluded, as were also patients who were moribund, or labouring under severe general ailment. Forty-two cases answered to these conditions; their average age was forty-two: twenty of them were cases of fractures and other injuries, seven had joint-disease, seven had ulcers, and the remainder had cancerous tumours or some trifling ailment. Of these, only two had albuminous urine; one was a man of intemperate habits, suffering from strumous disease of the knee-joint; the other was a syphilitic youth, with ulcer of the leg. All the accident cases—which were really the only cases fairly comparable with Dr. Dickinson's cases of death from accident—had not a trace of albumen in the urine; so that, instead of one in seven exhibiting signs of renal disease, there was only one in twenty-one, and this in spite of the inclusion of struma and syphilis. These numbers are far too few to found a safe conclusion on, but they indicate

very clearly the necessity for caution in accepting purely *post mortem* data on the condition of the kidneys. Dr. Dickinson is inclined to reproach me with testing pathological observations by clinical experience. I would in my turn venture to say that morbid anatomy, without the control of clinical observation, may sometimes lead very widely astray. There are still a good number of conditions which stand out in large outlines to clinical experience, which are vague and dim to the morbid anatomist. Need I do more than mention acute articular rheumatism, typhus, tetanus, and epilepsy?

We may be sure that the phrase "granular kidneys," as it occurs in *post mortem* records, means something else besides the granular degeneration of Bright's disease, as practically and clinically understood. And, in fact, the kidneys do often show granular surfaces in cases which have no real claims to be classed with genuine Bright's disease. I can only speak with exactness of some of these cases. In my work on *Urinary Diseases* (second edition, p. 350), I have pointed out the confusion into which morbid anatomists have fallen in not distinguishing the granular appearance of the kidneys consequent on long-sustained passive congestion of the kidneys, from the granulation due to Bright's disease. The anatomical identity of these two conditions, although generally assumed, has been denied on high authority, and clinically they are certainly distinct. A real combination of regurgitant heart-disease, or cirrhosis of the liver, with chronic Bright's disease, is comparatively rare; and when it exists, the renal affection never fails to vindicate its existence by its appropriate symptoms. But, as a rule, the passive renal congestion which accompanies impediments to the circulation is quite a subordinate condition, and has none of the clinical features of chronic Bright's disease. The urine is of high specific gravity and scanty, and it either contains no albumen at all, or only small quantities. The renal disorder has

no progressive tendency of its own; it does not produce the special secondary effects of Bright's disease, and it oscillates in its intensity strictly with the activity of the primary disease.

There are also morbid conditions of the kidney of a temporary character, which probably leave behind them certain alterations in the cortex of the organs much resembling granulations. When we reflect how many middle-aged persons have suffered in earlier years from scarlatinal and other forms of acute renal disease

— from syphilitic tubercles of the kidney, from renal gravel—how many women have suffered from renal congestion during repeated pregnancies, and yet how many recovered with practically sound kidneys from all these ailments—it is scarcely a matter for wonder that the organs should, years afterwards, bear upon their surfaces irregularities, depressions, and even more or less granulation with thickening and adherency of the capsules—not as indicating any existing disease, but, like a scar on the skin, as foot-prints of a bygone disorder.

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## Notes and Extracts.

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**HEALTH OF TEETOTAL WORKMEN.**—Beer-drinking is the curse of the English labourer; and yet there are men who maintain, in spite of facts, that workmen cannot get through a day's hard work without it. Mr. Brassey says that some of the most powerful navvies have been teetotalers. "On the Great Northern Railway there was a celebrated gang of navvies, who did more work in a day than any other gang on the line, and always left off work an hour or an hour and a half earlier than any other men. Every navvy in this powerful gang was a teetotaler." We can bear testimony to individual cases of a similar kind. We have known men on the line give up their drink, and become both religious and provident as well as sober.—*Times Review of Mr. Brassey's "Work and Wages."*

**A POOR-LAW INSPECTOR ON WORKHOUSE BEER.**—Mr. Longley, Poor-law Inspector, attended a recent meeting of the Islington Guardians, and congratulated the Board upon having taken the lead in the metropolis, in the matter of reducing the quantity of beer given to pauper helpers. He contended that it would be subversive of all discipline for the inmates of workhouses to imagine that they were not

bound to work in return for their board and lodging, without receiving extras in the shape of beer. If the diet was insufficient to keep up their strength to enable them to work, it would have to be altered, but he had heard no complaints with reference to the present dietary scale. He had just returned from Ireland, and he found that there the pauper inmates worked without beer or any other extras, and that too on a much lower diet. He did not say that beer was to be withheld in every case, but its consumption ought to be reduced to the lowest possible point.

**INDISCRIMINATE PRESCRIPTION OF ALCOHOL CONDEMNED.**—Mr. C. G. Wheelhouse, F.R.C.S., Surgeon to the Leeds General Infirmary, recently delivered an address as president of the Yorkshire Branch of the British Medical Association, in course of which he said:—"Nothing, I take it, can be more true than the assertion that men cannot be made sober by Act of Parliament; but is it not equally true that both men and women may be made drunken, and that only too easily by misdirected and unwise advice? In how many of the cases of the intemperate is the evil primarily laid to the charge of the doctor?"

'I should never have taken to the use of wine or spirits if I had not been advised, in the first instance, by my medical man,' is the excuse that has many and many a time been made to me when I have felt it my duty to speak plainly to unhappy patients on this subject; and though I know that very often this is only an excuse, yet I cannot hide from myself the fact that, in many cases, there is a grain of truth in the assertion. Many of us have been in times past, and some are still, too much in the habit both of recklessly prescribing stimulants, and of fostering the idea that they are an essential part of our aliment. It is against this habit that I would make an earnest appeal. . . . I am no teetotaler, and I do not desire to speak from any teetotal platform; but I am anxious, if I can do so without impropriety, both to speak a word of wholesome warning, and also to save a class of remedies, invaluable when rightly used, from the consequences of careless administration and abuse. Let us take the subject to heart, I entreat you; and especially in the cases of the young and of females, let the prescription of alcohol in any form be a matter of as serious consideration as that of opium or of strychnia, or of any other deadly poison; and when the necessity for their use has passed away, let their discontinuance be as carefully prescribed. The habit of indulgence, when once established, cannot easily be checked; and I would fain wipe away from the hands of the profession the stain of its careless initiation. If, after this course has been adopted, a patient wilfully drifts into their abuse, the fault will clearly be his own, not ours."

**ALCOHOLIC PRESCRIPTIONS RUINOUS TO REFORMED DRUNKARDS.**—At a Conference of the National Temperance League recently held at Windsor, the vicar of the parish, the Rev. Canon Ellison, made a request to five medical gentlemen who were present. "When any poor man or any one of any class of society, suffering from any nervous depression, might apply to them for advice, that instead of having recourse to the ordinary advice, and

say, 'You want a glass of whisky-and-water,' or 'You want a little sherry,' or something of that kind, they would inquire into the previous habits of that person, and if it should appear that his habits had been those of intemperance—if they should find that he was willing to give the whole thing up and become a water-drinker, because he could not take a little without taking a great deal, that then, and he hoped he was not asking too much if he said, let them cut off their right hand rather than tell them to go back to the drink; for in thus attempting to relieve such a man from his nervous depression they might make him a more confirmed drunkard than before, and in his dying moments he might say that if it were not for the advice given him, he might be going down to his everlasting happiness, but was now instead going to his everlasting misery. He had used strong language, but he did not do so without reason. There were men at the present time, far gone towards recovery, who had been seven or eight years abstainers, who had gone to the doctor, and had been by him, having no knowledge of his previous habits, told, 'You want something to lift you up.' The man, only too ready to take the advice, became worse than he was before." The Chairman, Dr. James Ellison, surgeon to the Queen's Household, said he quite agreed with the vicar with regard to the advice he had given. He always endeavoured to ascertain what the previous habits of a patient had been, and if he had been a teetotaler he should never advise him to take intoxicating liquor, so that if he were a total abstainer he might continue to remain so. But in some other cases he could not pledge himself to adopt such a course. He was quite unbiased, and when it was proved that they could do without stimulants, stimulants would be banished from their practice. That stimulants were not necessary in cases of delirium tremens he mentioned a case in his own experience where he had treated a case without it and the person had become an abstainer.

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THE PATHOLOGY OF DRINKING.

THERE are few persons who, having paid attention to our national intemperance,—always excepting those who are steeped in the most profound indifference to what is passing around them, and those who are blinded by rank selfishness,—will refuse to acknowledge that the Temperance Reformation is one of the most important movements of the age. Whatever objection may exist as to the practice of total abstinence from intoxicating drinks, it is admitted on all hands that the vice of drunkenness is a great, in fact the most, prolific source of evil among us. It is not an uncommon thing for those who take no part in the active working of Temperance Societies to give an expression of surprise or regret that so little advance in a good work has been made; it is almost as common to find that the unsatisfactory progress is ascribed to the extreme views of temperance advocates. There would be a large accession of numbers and influence, if the members of Temperance Societies could consistently preach against intemperance and continue the use of alcoholic liquors. It is useful to inquire where the hindrances to any great work take their rise, in order that we may know how to remove or override them. An inquiry of this kind in the present case admits of only one answer, and it is this: the main impediment to the spread of temperance principles is the respectable and, what is called, moderate drinking of the community. Much offence having been taken in certain quarters at this statement, as it is supposed to impugn the conduct of large bodies of devoted, earnest, conscientious and pious men, it is necessary to explain what is meant by those who make it. The assertion has often

been made in too abstract and unqualified a form, as if the moderate drinker is morally worse than the drunkard. It is only unwise people, hurried away by zeal and heated feeling, who would make such a statement, and it is no proof of acute discernment in an objector to regard it as anything more than evidence of a want of discretion or charity on the part of men who give utterance to it. The condemnation of any particular custom or act does not always carry with it the condemnation of those who through ignorance or weakness practise it, and it is very obvious that the higher the position, or reputation, or influence of those who countenance any questionable usage the more dangerous is the example. It is in this sense that temperate, or moderate drinking must be considered as the parent, and as throwing a sanction over the worst forms of intemperance. When men of good standing and position ceased to patronise prize-fights and other brutal exhibitions and amusements, such things fell into disuse; and if horse-racing depended upon blacklegs, and was not attended and supported by rank and fashion, it would be no more run after than a donkey-race at a village fair. When drinking is considered in all its antecedents and its consequences, it will be seen that the terms temperate or moderate cannot properly be applied to it, any more than they can be applied to any unlawful pleasure, or any impure gratification.

It is of vital moment that the question as now stated should be understood. It is always insisted upon that a well-defined nomenclature is essential to the teaching of any one of the physical sciences, and the meaning of terms is equally requisite in the study of moral or social science. Most of the disputes which have vexed the world, and retarded rational progress, have been based upon dialectical rather than substantial issues; and there are no terms now in use more vague and undetermined, and which have led to more error in conduct, than those of temperance and moderation when applied to the consumption of intoxicants. An example of the false and illogical notions that prevail, is given in the *Times* newspaper of February 27. It deprecates "the growing practice of enrolling young children in the Bands of Hope, and laying on those while unable to judge for themselves, a pledge of abstinence from an article of food which may in moderation become essential to them." And, again, "if the successes to be gained are to be rendered permanent, it must be remembered that it is temperance, and not abstinence, which is the ultimate object."

The whole article from which these sentences are taken displays a lamentable want of knowledge, unfortunately too common among newspaper writers, upon the subject to which the writer addresses himself. There is a weight of opinion and

testimony to which he would feel bound to pay respect, were he acquainted with its existence, in favour of the view that alcohol is not food, and there is no writer of the present day who would be looked upon as an authority who will assert that alcohol is food. This dogmatic assertion may be dismissed for the present, as also the piece of puerility as to the practice of enrolling young children in Bands of Hope. No coercion is used in these cases, and nothing is or can be done to destroy their free agency, or their responsibility as intelligent beings. They are not separated from the world, and can at any moment release themselves from an obligation which they enter upon as a safeguard against temptation. It is true they take a pledge, but it is not like a conventual or monastic vow that admits of no retractation or release.

Those who will take the trouble to examine the Bands of Hope will find that the influence sought to be exerted is a most beneficial one, and that no possible objection can be raised to these institutions but what will apply with equal force to any system of teaching or discipline known to modern times, and which aims at training the child in the way in which he should go. These are all matters that are somewhat beyond the province of this journal, but they challenge a passing notice. What does come within it, however, is to demand what is meant when the writer says that, "it is temperance, and not abstinence, which is the ultimate object." Will he define what is temperance in relation to drinks, the attractive spirit of which is alcohol? If we look inside of a Band of Hope we shall find it composed of boys and girls who have to take an active part in the business of life, who have to become the fathers and mothers of a succeeding generation, whose ductile minds are susceptible to impressions, and upon which "weeds taking root grow strong as flowers," and who are entering upon a world full of highways and byepaths of seductions and dangers. It is of vast importance to themselves, and more so to the general interests of society, that they should be taught that "wisdom's ways are ways of pleasantness," that they should be warned of the perils and allurements of the world, and that they should discern the true from the false. Let any unsophisticated but intelligent boy be taken, and he will at once detect the sophistry that lies under the plausible but unmeaning words quoted above. Direct him to what his own observation has enabled him to discover—the wide-spread ruin caused by strong drinks, that men and women do not suddenly fall into excess, but enter upon it by imperceptible degrees, and that although all men and women do not become drunkards, very many do, and that it is utterly impossible to say among those who drink, as it is called,

moderately, how many or who will escape, any more than it is possible in the midst of a raging epidemic, to say who will fall or who will be the first victims—and there is no difficulty in bringing conviction to his mind that abstinence is, at any rate, safety. He can easily understand, that however small the proportion of men going into battle may be slain, all who go into it are liable, and those who are not engaged in it, whatever other peril may await them, are at any rate safe from death by the shafts of war. The doctrine of abstinence is simple, clear, and intelligible, but what is he to make of temperance as applied to the consumption of an article that is slaying more of our people year by year than have fallen by any epidemic of the present century. He will ask—when you speak of temperance, be good enough to define in what it consists? I can understand taking none, but if I am to take it at all give me some rule by which I am to keep within the limits of temperate indulgence. Do not the effects vary with the kinds of liquor, the state of health, and a number of other circumstances, and is it certain that the same quantity will satisfy the appetite to-morrow that has satisfied it to-day. We apprehend that such teachers of temperance as are now referred to, have no answers to these queries but that of reference to the feelings, or sensations, and this leaves the whole question in a state of more “admired disorder” than before. Communities of men have been deluded by phrases during all time, but there has never been any so shallow and misleading as that of temperance or moderation in their application to the habits of drinking.

It must be confessed that there is, considering the force of habit and association, of usage and conventional hospitality, much difficulty in making the principle of the Total Abstinence Societies even understood. The practice is so much at variance with established opinions, that it is looked upon by many good men as asceticism, or fanaticism. It sometimes takes centuries, so inveterate is the force of prejudice and the indisposition to change, to establish an idea. It is little more than a hundred years since Beccaria made his humane effort to effect an improvement in criminal jurisprudence, and to teach the world that a reliance upon punishment for the repression of crime is a mistake. The lesson has been slowly making its way, but has not been adopted by all jurists, and many remains of dark and barbarous times still linger among civilised nations, and among ourselves. Reference might be made to many other instances, but it is certain that no reformation of manners has ever had so many obstacles to surmount as that under discussion. It makes a demand upon men to sacrifice a luxury that is more fastened upon their habits than any other. A vast trade has grown up

in the manufacture and sale of stimulants, and this trade yields a large revenue to the State. There are appetite, custom, and interest to contend with ; these have to be overcome, and this will be more speedily effected as good men are prepared to surrender the drink, and give the weight of their personal influence to the cause of abstinence. However startling may be the statement with which this article commenced, it is, nevertheless, unmistakably and emphatically true, that temperate drinking constitutes the foundation and the bulwarks of our national intemperance. No less could be expected than that many are scandalised at such an avowal ; but it is not less a duty to state it, and to show the ground upon which it rests. It must be looked at in all its aspects ; unpalatable truths must be told, and at the same time due allowance must be made for the conduct of those whom that truth appears to assail, but it is truth that makes men free. The position in which moderate drinkers find themselves is this : they have not yielded, or perhaps never felt the temptation to indulge to excess. Let a case be supposed. A boy is brought up in a well-conducted home, where all is order, punctuality, and regularity. The day ushers in the appointed duties, the comfortable meals are served in good time and in abundance, and there is little to disturb the even current of enjoyment. His parents are exemplary in their conduct, and select in the choice of acquaintance, and those who occasionally sit round the table are men of sober life and conversation. The bottle passes as a cheerful companion, what it contains is regarded as a good familiar creature, and the boy sees the clergyman, the doctor, and the lawyer—all men of education and refinement—partake of it. This is a part of the boy's education ; the education of youth is not valued as it ought to be, and he follows, upon his entrance into life, the example of those he reveres, and when he sits at the head of a table of his own, he no more thinks of banishing the bottle than he thinks of rejecting beef, or mutton, or other wholesome viands. He hears in his walks abroad of this or that schoolfellow, or of some old companion, or of some stranger who has fallen into drinking habits, and brought himself to shame or ruin, or his family to grief, and he is amazed at it. He decides that there is a fault somewhere ; that there has been some evil inclination in the fallen man that has not been kept under control, or, if the observer be a man of strong religious feeling, he supposes that there has been a neglect of religious duties, or a neglect of prayer. He seeks for a reason anywhere and everywhere but in the drink. He supposes that the will and the conscience are powerful in all cases to restrain men from excess, and he is apt to adopt the self-congratulation of the Pharisee, rather than a feeling of gratitude that he has not been exposed to

the temptations which have assailed the many who have slipped upon the path that he has steadily passed over. He does not see that he has stood upon the treacherous ladder, every descending step of which is more insecure than the preceding one, each rendering a descent more difficult, and the foot of which is strewn with rottenness and dead men's bones. He does not see that a disappointment of his hopes in some important crisis, failing health, accident, or bereavement, might have altered the complexion of his worldly fortunes, and that he might have sought solace in the bottle, until that resource had become a habit that it was impossible to shake off. "Let him that thinketh he standeth take heed lest he fall." How needful the daily prayer: "Lead us not into temptation."

It is difficult for those who have been kept above temptation to estimate the force of it, and thus moderate drinkers are unable to trace the links of the chain which connect what is called temperate, with acknowledged intemperate drinking. There are some even, who, by their physical constitution, could never become drunkards; there are others to whom drink is always a temptation, and in whom constant watchfulness and care are required to enable them to avoid excess. There are men who, so long as they are engaged in a severe struggle and much toil, remain abstemious, but when prosperity has dawned upon them, fall under the oppression of ennui, and resort to drinking; and there are others who, under a cloud of adversity, take to the glass; in fact, the circumstances under which men and women adopt drinking as a resource against the real or supposed ills of life are about as varied and as numerous as the characters of men. They cannot be anticipated or provided against, and such cases fall within the range of every man's experience. Every minister of religion, every medical practitioner, every solicitor, has to record instances of men and women of character and position having been wrecked upon this treacherous sea, and very many of the lost are never noticed by the outside world. Is there not enough in all this to induce men to inquire whether the agent producing all this mischief is not an evil thing in its very nature and essence, and whether, when so many are betrayed by it, any one can be considered safe. It is, above all things, important to inquire whether the popular notion as to temperance in drinking is not altogether a delusion, and whether the disuse of alcoholic beverages would not be a benefit to the human family, and an injury to none. If we pursue the inquiry diligently and impartially, we shall find that the postulate assumed by the *Times* is altogether false, and that the ultimate object, if we seek to subdue intemperance, is abstinence, and not temperance.

If men could free themselves from the prejudices which time and

custom have woven around them, and which bind them more tenaciously than would fetters of iron—if they could look underneath the plausible fallacies which prevail, and contemplate the philosophy of things, drinking would appear in its true light. Stripped of all disguises, we find that an article of daily use produces evil in a multitude of cases, has the property of creating an insatiable, and often an unconquerable appetite, actually nourishing the appetite it is taken to gratify; and, when so looked at, the conclusion is irresistible, that such an agent is at war with the healthy functions of the human being. Experience proves this, without any appeal to science. Practice always precedes theory, and men establish theories from what they know, although the knowledge they possess may be slight and imperfect, and not from vague conjecture. When the first temperance reformers asserted that abstinence was the only remedy for intemperance, and that men in health did not need, and were much better without stimulating drinks, although the doctrine was received in a drinking age, and by drinking people, with loud derision as an impracticable novelty, it was soon found that no new truth had been discovered and enunciated, but that a large, valuable, and instructive experience sustained the proposition. Whole races of men performed all the duties and labours of life without recourse to alcohol, and some of the best men, and most thoughtful reformers of every age, had practised total abstinence, not as a measure of self-denial, but for the simple reason that they were better without stimulants. Nay, many medical men in all countries had protested against the common or general use of strong drinks, and thus the early teachers of total abstinence found an amount of evidence ready for their use, much more potential than they had expected or hoped for. Since then there has been more than forty years' experience added to that existing before, and it establishes all that had been asserted, and very clearly this—that moderate drinking is the training school for the intemperate. It is a truth that cannot be refuted or evaded. And whatever special pleading may be used, it cannot be explained away.

It is scarcely necessary to say that science comes to the aid of experience, and shows, in its own way, that alcohol in any quantity disturbs the proper action of the vital functions. This disturbance—generally a pleasurable one in its first stages—constitutes the peculiar danger, when, philosophically considered, the agreeable sensations it creates are so many evidences of its seductive, insidious, and ruinous character; and it is idle to expect that moral restraint can be effectual where physical excitement and derangement have been produced by a foreign agent taken into the stomach. Those who teach such a doctrine are of “the blind leading the blind.” Man has a physical as well as a

moral nature, and they react upon each other. There is a law older than any written law, stamped by the Creator upon the constitution of his creatures, and it declares that no observance of a moral law will prevent the injurious action of a poisonous or unwholesome drug, if it enters the system. A glass of brandy will have the same effect upon the man who leads a godly life, as it will have upon the vilest sinner, all things else being equal. The question is, therefore, reduced to its narrowest limits. The motives to restraint may be stronger in one case than the other; but the physical effects, immediate and remote, will be the same in either case, and no physical derangement can take place without its affecting the moral being. Hence it is that we find men of exemplary character, of unimpeachable conduct, and of acknowledged piety, becoming slaves to drink. How does a career, which often ends so wofully, begin? By moderate indulgence, by taking strong liquors occasionally or at meals, those who take them hugging the belief that they have the power within themselves to avoid excess, and keep always strictly temperate.

The argument would admit of much amplification did space permit, and the subject might be illustrated by forcible examples, but such will have fallen within the experience of every reader. A very recent case, the whole history of which is known to the writer of this article, may be cited as proving most of the positions taken up in it, and showing the unsafety of what is called temperate drinking. A. B. began life under favourable circumstances so far as parentage and education were concerned, both father and mother being well conducted and industrious, loving each other, and attached to their children. After his apprenticeship he served some time as a journeyman, and with the saving from his wages and some small assistance from an uncle he commenced business, after taking a wife, who was in every sense worthy of him. For more than fifteen years he had a severe struggle with untoward circumstances, leaving him doubtful, to use his own expression, whether he should sink or swim, and sometimes in danger of losing heart and hope. He toiled hard and for long hours, lived frugally, and scarcely ever exceeded two pints of beer per day, one at dinner and one at the evening meal, and he never entered a public-house. It is impossible to select a better specimen of temperance, in the ordinary acceptance of that term. After fifteen years his prospects brightened, and success followed thickly and rapidly; but it was then found that his health was giving way. The mental anxiety attendant upon so many years of uninterrupted toil, had produced that nervous excitement, with prostration of the bodily powers, which are so often found together as the result of undue taxation of the

mind and body, and from an imperfect diagnosis, much too common in such cases, he was advised by his physician a generous diet with a free use of port wine. What he required was simple and nourishing food, rest and relaxation, change of scene and occupation, so arranged as not to do violence to the tastes, inclinations and habits of the patient. He required repose and nourishment, and not stimulation. Under the treatment he regained much of his lost strength, and with it a style of free living that he was always promising to shake off, but which clung to him in spite of himself, and, without becoming what is commonly called a drunkard, he drank very freely, and often to an extent that unfitted him for business, and died of a fever brought on by excess, and this within five years of the time when success began to dawn upon him. The last years of his life from this cause were more full of bitterness than any years of his arduous struggle. Both his physician and himself had a belief in the restorative powers of wine, and to this belief the latter fell a victim.

It was said, as is usual in all such cases, that it was very strange that a man who had been remarkable for his abstemiousness during so many years of struggle, should give way to excessive indulgence when the struggle was really over. There is nothing singular or strange in the case. He began the use of wine at that period of life when the stimulation was most likely to be attractive, and when it was certainly the most dangerous as affecting his future habits. The case is by no means exceptional, and not so much so as deaths by actual and acknowledged intemperance. We have men thus dying about us every day, wearing themselves out in desperate effort, and the end is confirmed hypochondria, disease in various forms, insanity, drinking, and sometimes suicide. The majority of them do not succumb until, like A. B., they have attained success or see it near their grasp. It is said of the first Napoleon, that he would in all probability have lived for some years longer, if the field which gave scope to his ambition had not been closed to him. He was an example of a numerous class of men who, in the early part of their career, adopt a Spartan simplicity of diet and manners, and are capable of almost superhuman exertions, their energies being sustained so long as the necessity for action continues. Inaction destroys them. Such men remind us of the athlete in the ancient games, who bore up gallantly in the race, with unfailing nerve and unslackened speed, until he reached the goal, and then fell fainting at its foot. It is at the moment of exhaustion after long fatigue that alcohol is the more dangerous. It attacks the system when it is weakest. The fierce competition of the age, the love of luxury, the refinements of civilisation, make large

demands upon the energies of the people, and it is therefore the more necessary that they should avoid excess of all kinds, and especially indulgence in an article which increases the excitement, when it is supposed to strengthen the powers of endurance. At the best, it is levying a tax upon the constitution that the future will have to pay back with interest.

In the case now cited we have the example of a man who was brought up in a comfortable home, and who during his struggles possessed one. He had a fair education, and it is clear that he was not destitute of moral purpose. In fact, he had great tenacity of purpose. He discerned clearly the path of duty, and never swerved from it so long as his energies were required to sustain his business; and yet drinking became a habit in the later years of his life, when the reward of honest exertion had come, and this drinking hurried him to a premature grave. There are men who by sudden prosperity are thus betrayed, and others by adversity. There are amiable women who, on the death of a beloved husband, rush from solitude and sorrow to drink. It is folly, or something worse, to seek for the causes in the weakness or frailty of human nature; the fault is in the drink. Drink poisons the springs of life, and may go on corrupting them for years before any apparent manifestation takes place. Take any assembly of men, and it is impossible to predicate which of the number will escape. No one can boast of possessing a charmed life. The temperate indulgence of this year may grow into excess next year, and habits which it may appear easy to shake off when they are newly formed, fasten themselves in time so as to be oppressive and immovable. The question remains, whether liquors capable of producing drunkenness are proper as daily beverages. Experience and science say, No!

If these views be correct, what becomes of the statement of the *Times*, which represents the views of those who contend for what is called temperate drinking, and who believe that general temperance can be secured and the consumption of strong drinks continued? There is a confusion in the statement itself. The ultimate object sought is the suppression of intemperance; the means to attain that much-to-be-desired end is the question under discussion. It will never be attained so long as alcoholic drinks remain the beverage of the people; the conquest over intemperance is to be achieved by total abstinence, and the men who inculcate this doctrine to the rising generation are among the most practical benefactors of the age.

## ALCOHOLIC QUACKERY AND PROFESSIONAL PUFFERY.

MEDICAL men are proverbially and most righteously sensitive in regard to the public use that may be made of their names. No class of men are under greater call, from the peculiar nature of their duties, to bear themselves with reticence and delicate reserve. They know—for they cannot be long in practice without being compelled to discern—the potent personal influence they have over those who anxiously and confidently commit themselves to their professional care. Hence, singular as it might seem, it was no way surprising to us to observe the manifestation of sensitive feeling which in certain quarters greeted the issue of the Medical Declaration. Professional men could not brook the assumed imputation of being to any degree accessory to the spread or continuance of intemperance. This stain upon their honour they felt like a wound. So far this was well. It was the voice of their nobler instincts, of their inner and proper self, speaking out from all their unconscious delinquencies and professional mistakes; and thus far it was commendable and welcome. But it would have been more to the purpose had that stung feeling roused its subject to look the facts calmly in the face, instead of expanding and relieving itself in spurts of irritation. And when some of the medical journals that countenanced the Medical Declaration, permitted themselves to join in the cry on finding that document circulated in company with a stirring tract by a member of their own profession, they only evinced that practitioners have their prejudices, even as others, and may, under the name of professional sensibility, give way to morbid and mawkish sentiment.

But letting all that pass, and even conceding for the moment that their wounded feeling did not overstep righteous limits, let us now compare, or rather contrast it, with the strange insensibility, if not rather downright satisfaction with which distinguished members of the profession and leading medical journals freely lend their names to a system of as gross puffing and as transparent quackery as any that could be mentioned. We refer to the notorious practice of advertising alcoholic fluids under the name of “nourishing stout,” “Robur,” and other *quasi* medicinal appellations, backed by the imprimatur and the names of influential physicians and medical journals. This we profoundly regret and disapprove on various grounds.

First, for the honour of the profession we regret the flagrant inconsistency of medical men flaring up twelvemonths ago at the

faintest suspicion of any of their number encouraging intemperance, however unconsciously, by inconsiderate prescriptions of alcoholic fluids, and remaining as quiet as lambs, without peep or mutter, when they see, under their very nose, in the advertising columns of their own and of the general press, the names of their influential organs and distinguished men tamely lent and ostentatiously used to puff into extensive sale and use, not only as salubrious beverages but as sovereign drugs, strong liquors whose prime virtue means alcohol, and the extended sale of which means the extension of alcoholisation among the people, with its certain issues of depressed vitality, misery, and intemperance. A year ago our professional Bayards could not brook the remotest insinuation that such a thing as practitioners, however unconsciously, encouraging intemperance was possible. And now, behold, there is the naked fact parading itself before the sun; the fact that great brewers, distillers, wine merchants, and all the fountains and forces of drinkdom are flooding the land with liquors belauded by high medical names, that are as certainly promoting intemperance as if drink licences were to spring up on every hand, and which are doing it more potently because more plausibly and seductively than by almost any other influence which it is possible to imagine.

Again, we profoundly regret this professional facility in acting as catspaw to the Drink Dragon as still further aggravating the inconsistency of our medical authorities by the open countenance they thus lend to quackery, which is the thing of all things they profess, with one consent, to abhor and condemn. It is a thing, too, which they have often and must unsparingly exposed. Now, what is quackery? Here is an answer, rough and ready, from old Samuel Johnson, and let us take it from the beginning:—"To *quack*, verb active. 1. To cry like a duck. 2. To chatter boastingly; to brag loudly; to talk ostentatiously. *Quack*, substantive (from the verb). 1. A boastful pretender to arts which he does not understand. 2. A vain boastful pretender to physic; one who proclaims his own medical abilities in public places. 3. An artful tricking practitioner in physic. *Quackery*, substantive (from *quack*). Mean or bad acts in physic; false pretensions to any art." Take any one of these elements of meaning, or all of them together, and say if ever they were verified and incarnated on a scale of completeness to compare with that exemplified every day by the huge, colossal quacks of the cellar, the vat, and the still? Did ever healing pretender "talk" more ostentatiously, or "quack" more like a goose? Who ever "bragged" more loudly of their not only worthless, but positively venomous, wares? or "proclaimed their medical abilities in public places" in more brazen accents than do our alcoholic quacks in that most

public of all places, the advertising columns of modern journalism? And yet these, and these only, are the quacks whom medical men will tolerate, and not only tolerate, but condescend to serve in the capacity of trumpeters. Is it because they are big? Is it on the principle that whereas the killing of one individual makes a man a murderer, the killing of a thousand elevates him into a hero? Perhaps there is a further reason still; but before adducing it, let us give a sample of the puffery and quackery to which we refer.

In a recent number of one of our medical journals, a page of its advertising department is occupied with the celebration of a particular kind of sherry, which bears the name of "Specialité." The advertisement is headed in bold type, "British Medical Association," the members of which, and the medical profession generally are duly notified that this wine is "only to be obtained at their two establishments." The medical journal in which it appears is next quoted as bearing testimony to the rare qualities of the liquor. Among other things it says:—

"Looking upon sherry as one of the most useful of the dietetic and medicinal agents of the physician, when used with the care and prescribed with the exactness which we are distinctly of opinion should be required at his hands, we can speak very favourably of this wine. It has in four specimens, which we have collected over varying intervals extending for eight months, presented all the characters of a sound, palatable, and wholesome stimulant, such as those may use with pleasure who treat wine as a part of their ordinary luxuries of diet, and such as those may prescribe with confidence who find it necessary to order wine as a medicine."

The reason for heading the advertisement with "British Medical Association" is made abundantly evident by the following statement:—

"This wholesome wine was exhibited by special permission at the Annual Museum of the British Medical Association, recently held in Birmingham; its rare and useful merits were particularly recognised, and a large number of sales were registered."

The grateful firm, in conclusion, "respectfully beg to thank the medical profession for their extensive recommendations and testimonials of this valuable wine, 'so long required and looked for'; and their closing word is a direction in regard to "hospital orders."

Another sample of these professional puffs relates to fermented liquors as manufactured by one of our greatest and most respectable brewers, who, besides seeing to the genuineness of the article according to its kind, takes special care that it be well bottled—a process, it appears, often untidily and carelessly performed. Three of the principal medical journals are then quoted

under the heading, "Opinions of the Medical Press," all of whom recommend it in glowing terms. The first declares it to "be specially adapted for invalids"; the second ascribes to it a "genuineness that has long been desired, and is worthy of recognition"; while the third, after duly notifying the moderate prices, winds up with the recommendation, "We should say, give it a trial."

From the wine and beer varieties, let us now pass to the distilled liquors. One of these medicinal alleviators of human woe is that known and blazoned forth as "Old Irish Whisky." A sample of this, says a medical journal significantly, "has been forwarded to us, with a request for our opinion." He no less suggestively adds:—

"Having recently had occasion to speak well of certain samples of Scotch whisky, we could hardly refuse their request to examine this, lest we should offend some susceptible spirit jealous for the honour of his native land. At all events, the sample forwarded to us was exceedingly good, and gave general satisfaction. It is not at all easy to compare, and comparisons are 'odorous'; we shall, therefore, avoid them as far as possible. This Old Irish Whisky, however, has got qualities of its own sufficiently valuable to recommend itself."

These he then proceeds to describe. The whole matter is as transparent as the clearest mountain dew. These samples are regularly handed in to our professional helmsman in complimentary terms, with a respectful request for an expression of opinion; in simpler phrase, for a word of commendation. This it is hardly in polite unteetotalised human nature to refuse. A few bottles are a kindly thing, and when they come in on their own feet they wear a gracious look. If they will at all bear a word or two of praise, let them have it; and then their contents may be used with a good conscience at our leisure. Even this is sometimes felt to be a bore. Only, "having recently had occasion to speak well of certain samples of Scotch whisky, we could hardly refuse their request to examine this." And thus the cat leaps out of the bag to the edification of all thoughtful observers, and the processes of commercial pushing and of professional puffing go harmoniously on.

No better illustration of this harmonious relation of trade and science could well be desired than that recently exemplified over a particular variety of Scotch whisky, which both these consentient interests combined to recommend; and that in the following very singular way. Allusion was made to the famous Medical Declaration as having recommended that alcohol should be prescribed with as much care as any powerful drug; and the comfortable conclusion was straightway drawn that this choice variety of Scotch whisky was, in this view, the very article that

all wise men would select. However this might satisfy the qualitative requirements of the recommendation, pharmaceutically considered, it entirely ignored the quantitative aspects of the case, which most readers of the Medical Declaration will probably concur with us in thinking was the chief one prominent in the minds of the eminent physicians who drew up and subscribed that important document.

One of these spirituous shams may here be alluded to—that long-paraded nostrum of rum-and-milk; especially as it has just been belauded anew in one of our medical journals as a valuable drink for consumptives. What the writer there says of the milk is true enough; and it constitutes the whole truth in the present case. What he adds of the rum as “aliment,” and as “promoting digestion,” is worse than a mere unsupported assertion; it is an assertion that goes in the face of all recent alcoholic investigation, which demonstrates that in many destructive ways alcohol impedes digestion, and paralyses the very nerves by which the process is vitalised. Where good is done by rum-and-milk, it is the milk that does all the good, and that in spite of the rum; and cases could be cited where great good was done by the quiet omission of the rum and the sole use of the milk.

One advertisement more we must notice, as the most quackish of the whole, inasmuch as the liquor it belauds professes to be a wholesome substitute for the ordinary class of spirits, doing all the good that it is in them to do without their attendant evils, while all the time alcohol, the arch-impostor, looks forth from it as its prime ingredient and living soul. We refer to the thing puffed under the name of “Robur,” or “Strength,” the “new tea spirit,” as it is also called. A scientific gentleman, an “F.R.C.S.,” is quoted in the two columns of advertisement of it which lately appeared in the *Times*, as thus testifying to its nectarine qualities:—

“From the analysis of the new spirit, ‘Robur,’ it appears to be a cordial and tonic stimulant, holding in solution, in a very agreeable form, ingredients calculated to exhilarate the system without subsequent depression. Being pure, it must take a high position as a spirit for augmenting the vital forces, and displacing many of the pernicious drinks that now flood the market to the manifest injury of the public.”

Let any intelligent man, who has made himself acquainted with the simplest results of alcoholic investigation, only bethink him what importance is to be attached to any testimony which declares of a stimulant confessedly alcoholic that it is “calculated to exhilarate the system without subsequent depression”! Is it not one of the settled points of physiology that the stimulating effects of alcohol, however accompanied or however disguised, are the signs of paralysing action on the nerve substance which,

to the extent to which it is carried, as surely involve subsequent depression as the going down of the sun brings on darkness?

And what are we to think of "the high position" which this testimony asserts and predicts for it "as a spirit for augmenting the vital forces," when it is notorious that the direct effect of all alcoholic action is to depress vital force and reduce animal heat? The "pernicious liquors" which it is proposed to supplant, are beyond all contradiction pernicious, almost solely for a reason for which "Robur" too must be pernicious, namely, that they are alcoholic fluids.

We regret to perceive that the distinguished Coroner of Middlesex has allowed himself to be drawn into this questionable service. He, too, is introduced into the advertisement as having given the following Report on the composition and properties of Robur:—

"I have chemically examined specimens of Robur procured from the Robur Distillery, and also from the shop of Mr. Jonathan Puckridge, of Oxford Street. The properties of the two specimens were the same.

"The principal substances contained in Robur, according to chemical analysis, are alcohol, tannin, théine, sugar, and some tonic flavouring principles.

"None of the fusil oil of grain spirit can be detected, nor is there anything found that can be in any way regarded as an adulteration, either for the purposes of increasing the bulk or cheapening the sale.

"This spirit is pleasant to the taste and clean on the tongue, and has the flavour and constituents of tea; hence its name, tea spirit. It may be recommended as a substitute in all cases where distilled spirits are used as an ordinary article of diet, or where they are prescribed medicinally.

"There can be no doubt of its superiority, as a medical stimulant, to the common forms of brandy, whisky, gin, and rum.

"This arises from its freedom from fusil oil, which is constantly present in the low-priced forms of these spirits, and which act injuriously on the nervous system, as shown by sickness, palpitation of the heart, headaches, and other symptoms.

"Quite independently of its action on the body as a condition of pure alcohol, Robur contains other principles which exert a beneficial influence on the system.

"The tannin derived from tea acts as an astringent; a quality which is frequently desirable, and is recognised in port, burgundy, claret, and other red wines, which are so popular.

"The théine acts the same way as when taken in tea, and is rendered less likely to produce ill effects from its sedative qualities by being combined with alcohol, than when partaken of without such stimulant, as in ordinary tea and coffee.

"The volatile flavouring and tonic principles derived from tea not only give their peculiar flavour to Robur, but act as veritable tonics and stimulants upon the nerves of the stomach and system generally.

"The saline principles are small in quantity, and not of a kind to interfere in any way with the beneficial effect of Robur as an article of diet or medical prescription.

"The sugar contained in Robur is not in a condition to ferment, and is not in sufficient quantities to render it injurious.

"Robur is also entirely destitute of acidity."

Here, as the result of his analysis, Dr. Lankester names as the first and foremost of "the principal substances contained in Robur," alcohol; and he subsequently describes Robur as "a condition of pure alcohol." This at once determines its character as an alcoholic fluid of the most destructive variety, that known as ardent spirits; this is enough for us.

We will frankly concede to him all the fine things he says of it, as free from adulteration in the ordinary sense; and this we can afford to do the more readily that of all its imaginable adulterations alcohol would remain itself the crown. We will also admit its comparative superiority to coarser spirits owing to its freedom from fusil oil, and for the other reasons mentioned; though we confess the statement, that the théine contained in it "is rendered less likely to produce ill effects from its sedative qualities by being combined with alcohol," comes to us in a very questionable shape. It sounds like, "Set a thief to catch a thief;" or like Dr. Abernethy's prescription for the boy that had swallowed a mouse, to go and next swallow the cat. True, "where rogues fall out, honest men get their own," but their own in this case is but the negative benefit that each keeps the other from poisoning, or very seriously injuring us—a result better attained by keeping both safe outside of us. We have little faith in the Kilkenny Cat problem—except in that part of it which informs us that the two tails were left; assured as we are that no mutually destructive action of two noxious elements is ever likely to take place in the human system without leaving that system scratched, or scarred, or scorched, by the collision. Moreover, we much desiderate evidence that this reciprocally destructive action of théine and alcohol, when they meet in our stomach, could really occur, or occur to the extent required. We are irreverent enough to believe that many statements of that kind occur in similar professional deliverances which are devoid of authoritative proof, but inconvenient or difficult to disprove, and which sensible people, therefore, may in the interim shelve as "not proven" (according to the Scottish formula) if they are too charitable to label them off as "great swelling words of vanity."

"This spirit is pleasant to the taste and clean to the tongue;" very likely. So are many things which, nevertheless, "in the belly are bitter." It has "tonic" qualities too. Possibly; but sure we are, that boon nature has provided us with plenty of admirable tonics without our requiring at all to be dependent for them on an alcoholic fluid.

One of the most reprehensible, in our judgment, of all the expressions in this influential testimony is that which says: "It may be recommended as a substitute in all cases where

distilled spirits are used as an ordinary article of diet, or where they are prescribed medicinally." With the latter part of the statement we have, of course, no fault to find. It is no part of our testimony, either as medical practitioners or as temperance reformers, to banish alcohol entirely from the *Materia Medica*, provided it is prescribed and used with the same care as any powerful drug; and, considering the potent character of the drug, it is on all accounts to be desired that it should be obtainable in a form as pure and genuine as possible. But we profoundly regret the *implicit* countenance lent by so high an authority, and by so well-disposed and, generally speaking, right-minded a man, to the practice of "using distilled spirits as an ordinary article of diet." Surely we had a right to assume that we had got beyond that. "Distilled spirits as an ordinary article of diet"! Shades of Astley Cooper, Cheyne, and many more of the illustrious medical dead, not to name plenty more of the no less illustrious living, what, at this hour of the clock, are we to make of a deliverance like that? We have been warned by you, and taught by your own example, to "keep no ardent spirits in our house, believing them to be evil spirits," and that whoever would call that in question has only to witness some of "the white livers," wheezy lungs, and other numberless evils which every practitioner in his varied experience is painfully familiar with. There is not even thrown into this statement a qualifying word to caution the public against the habitual use of so deadly a drug; rather will the more inexperienced of the public, or that part of them who are already only too predisposed to such indulgence, be apt to interpret it as a virtual sanction for the daily presence of the spirit bottle on the table, especially in this new and much-vaunted form. And yet, is there a medical man of any reputation, whatever may be his feeling and relation to the great temperance movement, who is not ready to testify—and Dr. Lankester, we doubt not, as emphatically as the rest—that this habitual use of distilled spirits as an article of diet, even in moderate quantities, is immensely more ruinous to the human constitution, and never fails to demonstrate this by dire and sensible tokens, than occasional free indulgence even if carried to excess.

Among these belauders of Robur is the influential name of the *Lancet*. It says: "The combination of spirit and tea is by no means a new or uncommon one, and *we are all familiar with it in the form of a small addition of brandy to our matutinal cup of tea*, when the stomach is weakened or overtaxed, and requires a little stimulus. In such cases the combination often exerts a beneficial effect." Yet the *Lancet* immediately adds, "That the tea modifies the action of the spirit is unquestionable; but the precise physiological action and effects of the continued use of

such a beverage must be determined by experience." This is sufficiently vague; but it makes no secret of the fact that the so-called "unquestionable" result of the modifying action of the tea on the alcohol can boast as yet of no ascertained physiological principle for its foundation. We go a step further back, and question at this stage of inquiry the authenticity of the fact itself. Nor do we thank the *Lancet* for countenancing the ensnaring and injurious practice of adding a little brandy to our tea as a "combination" which "often exerts a beneficial effect." An authoritative dictum like that may have more influence for evil than its propounder dreamt. How many will grasp at such a warrant for a practice they are insensibly gliding into, who, by a contrary testimony, might have been kept from lapsing further. The same journal, in that same column of "Analytical Records," mentions approvingly a new Spanish red wine, called "Novarinta," which contains nearly fifteen per cent. by weight of absolute alcohol. It says: "As these results show the wine to be exceedingly rich in all the constituents of the grape, 'Novarinta' may therefore be regarded *as a rich and sustaining wine*, well adapted to replace in the markets cheap ports, and is well suited for hospital uses." Here the old fallacies of nourishment in general, and hospital nourishment in particular (the prolific source of so much waste and abuse) as derived from wines strongly drugged with alcohol, are again reasserted, and will do unquestionable mischief so far as the influence goes.

There is not a little, we are aware, that may be advanced in defence of medical men lending their testimony to alcoholic fluids in the above-mentioned ways, or at least in bar of any austere and harsh judgment on that behalf. These samples it will be said came in to us unsought, as public men, whether in the capacity of professional practitioners, or of the conductors of professional organs. Besides, considering the many and multifarious liquors that claim the suffrage of the luxurious public it is due to society to disseminate information as to the best, or, if you prefer it, the least harmless of these drinks. Moreover, we do not profess to be teetotalers, and are therefore not disposed to bend our necks to the rigorous yoke which such fanatics would fasten upon us. We must as public and scientific men speak forth our minds with the gravity and independence of analysts and judges, and leave it to the public to make what use of our scientific verdict they choose.

All this is very plausible, and is not without its modicum of justice and truth. But the misery is that it is much too highly pitched to realize itself in actual experience with the thoroughness and fidelity which the importance of the case demands. It is hardly in human nature, considering the circumstances, that it should be so realized. These things come pouring in upon

them from various quarters, one after another, and the natural bent is to give each its desiderated meed of commendation, and have done with it. Where it is submitted for careful analysis, the case is somewhat different; but even then a natural bias in favour of the party who employs and remunerates you, and who has come to you for trade ends, is apt to complexion the verdict. Were it the case of leaders of scientific opinion, or influential practitioners and savans at their own instance, selecting samples for analysis and then publishing their verdict, it would wear a very different aspect, and lead, we are confident, to very dissimilar results. But as the men of science applied to do not belong to this class of investigators, the professedly solemn scientific investigation too often degenerates to a sham, and the judicial deliverance becomes hopelessly discredited and condemned.

So far as concerns the manufacturers and vendors of the belauded articles, there is little need to say much, for on their part there is no difficulty to clear up, no mystery to disclose. They act on well understood and highly efficient tactics of trade. If any commercial man, no matter what the article of sale may be, can only procure for it influential and authoritative commendation, his course is clear. He has only to procure it, by all means, and even, if able, pay well for it, and then launch it on the public through all advertising media so far as his means may permit. But in the case of intoxicants, there are very special and weighty reasons for his resorting to this method. By great social movements, by the very advance of physiological science, doubts have been cast on the safety and salubrity of many so-called beverages that were wont to find recognition and use as almost necessities of life. By getting doctors to speak—the men, presumably, who best can tell—they take the best of all methods for rehabilitating in the public regard the impeached and imperilled liquors on which hang their gains, and thereby knocking the legs from under teetotal fanaticism. They know also that in the prepossessions, and predilections, and traditions, and associations of society, they have, and are likely long to have, strong and often almost impregnable ground; so that when they thus procure medical backing they do the very best thing possible or imaginable for their purpose, and accordingly “practice and prosper,” on the gullibility and capacious swallow of John Bull’s calves. Let us hope that a victimised public will soon begin to open their eyes, and that a humiliated medical profession will also bethink itself seriously, and no longer permit the Drink Dragon to trample its honour in the dust.



## MEDICAL COMFORTS FOR PAUPERS.

WE have frequently expressed surprise at the great differences in the quantity of alcoholic liquors used for medical purposes in hospitals and workhouses, and we have reason for believing that there is as great a difference in the quality of the liquors as there is in the quantity. An inquiry was directed last session into the supply of provisions for the metropolitan workhouses, and it has brought to light the great variation in the prices and qualities of the intoxicating liquors employed in medicating the inmates of twenty-eight of these institutions. The prices for the so-called brandy ranged from 15s. 3d. to 26s. 6d. "Some of it was considered to be a mixture of grape and grain or potato spirit, and, therefore, not so suitable for medical comforts as Cognac brandy." In this respect the spirit was no worse than a great deal of the spirit sold under the name of Cognac for the use of private consumers. The prices of gin ranged from 9s. 10d. to 15s., and the report states that, with one exception, "all the samples are of low quality, and made from very coarse spirit; they vary considerably in strength, and are not, in our opinion, such as should be used for medical comforts." The price of port is from 7s. 6d. to 15s., and the report says, "We do not consider these wines as suitable for medical comforts." The practice of calling these intoxicating liquors by the name of "medical comforts," ought to open the eyes of the ratepayers. If these liquors are food or physic, then there may be propriety in furnishing them to the paupers. But if they are only "comforts"—something to please or satisfy an appetite created by drinking, it is a serious question whether the sober and industrious ratepayers ought to be taxed to supply them.

There is something ludicrous in the terms applied to the port wine. Two of the samples are described as "good and fit for the purpose"; fourteen are "sound," in one case of "fair quality," but in several other instances "new and rough in flavour," "thin, new, but of light quality"; one "middling quality"; one "old wine, but rather thin"; two "poor in quality"; two "new, of a casky flavour"; one "inferior"; one "thick and out of condition," and one "thin and in a state of incipient fermentation." This is a curious description of pauper "medical comforts," but it would equally apply to the coloured liquids sold under the name of wine, and consumed by persons of respectability. It is amusing, though pitiable, to see ladies and gentlemen drinking the liquors called wine, of the production, composition, and properties of which they know nothing.

Of course the poor people in workhouses are not expected to understand the nature of these "medical comforts"; but as they are called wine, and are given by the doctor's orders, they are received with gladness. If wine is really necessary for the inmates of workhouses, there ought to be some standard for its quality, so that it may be fit for its purpose. But there is nothing of the kind. The wines differ in specific gravity, in alcoholic strength, in the quantity of sugar and acids, and in the other constituents. Perhaps this may not be considered of much consequence, as they all contain alcohol, and that is the ingredient which is supposed to render them suitable as "comforts."

Still, it is strange that in these days of sanitary reform and scientific progress, such discordant mixtures should be administered to poor persons in our workhouses. As public analysts are appointed in many parishes, they might be employed to analyse the liquors, and though there are no reliable tests for the purity of wines and spirits, yet at any rate the boards of guardians should be made acquainted with the per centage of the different constituents of these "medical comforts." At present there is no certainty as to their composition, and looking at the varying quantities used in different workhouses, we are forced to the conclusion that they are generally prescribed without rhyme or reason.

A guardian has furnished the following graphic account of the way in which parish contracts are made:—

"My experience has proved to me that the way in which samples of goods sent in on tender are chosen is very imperfect, inefficient, and disadvantageous both to the paupers and the ratepayers, more especially with regard to the articles of consumption like wines, spirits, teas, &c. By way of illustrating the manner in which the former two items are decided upon, you must imagine twelve or fifteen gentlemen seated at the board table to judge which is the most suitable out of eight or ten (or even more) numbered samples of port wine. The master or assistant supplies each gentleman with a wineglassfull of each, in quick succession; some drink the whole, others half, and a few take a few sips. After this actual drinking has been gone through, with the accessories of bread, biscuits, or cheese, the committee are called upon to vote for the sample they consider best; the highest number of votes decides which is to be supplied for the next six months. Then follow an equal number of samples of gin and brandy; some drink a small quantity neat, others with a little water; then a majority of votes decides which is considered the best. I have known instances where only one of these two spirits has been looked at or examined, the contract for the remaining one being given to one of the successful contractors in previous articles. Indeed, I have been informed that on the last occasion of the spirit contract being given out at this union, after the brandy was decided on, the gin was not even looked at, but ordered to be supplied by the contractor who had been selected to supply the brandy. One of the consequences of this 'free and easy sort of way' in selecting goods is, that there is a very likely chance of the sick paupers getting a frightfully inferior article, for which the ratepayers pay at a rate for which they ought to get a superior one."

This is certainly a popular although a very unscientific way of judging of the qualities of intoxicating liquors, and there is no wonder that the liquors differ so greatly in price and quality. But if these liquors are of service in the treatment of disease, if wine is given, not merely to please the patient, but to cure disease, then it ought to be of the quality most suitable for that purpose; and it is certainly not the province of guardians to decide upon the virtues of medicines. But the question arises, Are the intoxicating liquors used in workhouses employed as medicines? And the still wider question, What diseases do they cure? And as they are used in such different quantities in the various workhouses, upon what scientific principles are they prescribed?

We think it is absurd to suppose that the great quantity of intoxicating drinks consumed in workhouses is used as a medicine, or that these liquors effect many, or any, cures. As to the ground upon which they are prescribed, our conviction is that routine, a desire to please, or thoughtlessness, have more to do with the prescription of these liquors than the condition of the patients; and it is time that a full and searching inquiry should be made as to the quantity and quality of the alcoholic liquors used in workhouses.



## Miscellaneous Communications.



### ALCOHOLISM AS A DISEASE OF THE NERVOUS SYSTEM.

*From a lecture delivered at the Westminster Hospital, by FRANCIS E. ANSTIE, M.D., F.R.C.P., Lecturer on Medicine at the Westminster Hospital School, &c.*

THE continuous use of alcohol\* in excessive quantities produces effects upon the nervous system which may vary a good deal according to circumstances, but which always present certain common features. There is

this important difference between the influence of continuous intemperance upon the nervous system and its influence upon other organs of the body (especially upon the digestive apparatus)—that, whereas in the latter case very much depends upon the kind of alcoholic liquor taken, and particularly on its degree of concentration, the effects of alcohol on the nervous system seem to depend almost entirely upon the quantity of alcohol

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\* An ordinary drunken fit does not come within the scope of our description; it is a case of *acute* alcoholic poisoning, and belongs to the domain of toxicology.

taken in each day or week, and very little upon the particular form used. Given the continuous abuse of alcohol, in any shape, to a certain average extent, we inevitably find the development of a characteristic group of nervous symptoms, of which the most important are—1. Disturbance of the brain, with production (*a*) of insomnia, (*b*) of hallucinations, (*c*) of progressive loss of intellectual and moral power. 2. Disturbance of the voluntary motor system, producing (*a*) restlessness (*b*) distinct and persistent tremor. 3. Disturbance of the reflex system, producing (*a*) rhythmical morning vomiting, (*b*) convulsive startings of the limbs.

Among the more occasional phenomena, which only occur when the chronic poisoning has been very profound, or very long continued, or both, are delirium tremens, paralysis of sensation, epileptiform convulsions, insanity of the maniacal or melancholic varieties (ending in dementia), apoplexy from cerebral hæmorrhage, hemiplegia from atrophic brain-softening, paraplegia from a similar condition of the spinal cord; more rarely meningitis, cerebritis, or myelitis.

I would impress upon you at the outset, however, the fact that in a very large majority of cases the graver phenomena enumerated in the last paragraph do not come under our notice. By far the greater number of chronic drinkers either live to an old age with only the characteristic symptoms (aggravated from time to time) which were previously described, or—which is much more common—are cut off by intercurrent acute diseases, the destructive power of which has been increased by the generally deteriorated nutrition of all the viscera which intemperance has gradually produced.

The bulk of the intemperate who apply for medical advice are distinguished by the following characteristics:—They complain that when they go to bed, however drowsy they may feel, an intolerable restlessness makes them turn from side to side and forbids sleep for a considerable time; that when they fall asleep they are apt to wake with a start; that in the morning

they always either vomit or at least retch. Very commonly they also complain of just so much muscular tremor as is sufficient to make them unfit for delicate handiwork until they have had their breakfast or a morning dram. If the thing has gone somewhat further, they tell us of continuous terrifying dreams, or of flashes of fire, before their closed eyes, or of positive hallucinations, such as the seeing imaginary objects in the broad daylight, or (much more rarely) the hearing of unreal voices, or the smelling of unreal odours. Observe this, that all the impressions on the mind are gloomy and depressing, if not absolutely terrifying.

The aspect of the chronic drinker is in many cases most characteristic and unmistakable; you may often correctly diagnose the complaint before asking a question. His eyes are nearly always red, watery, and slightly jaundiced; his nose, forehead, and cheeks sprinkled either with red pimples or with a number of dilated capillary vessels. The expression of his countenance is furtive and timid, or else nervously swaggering; and there is either positive tremor of the hands, or, at any rate, great restlessness which prevents him from keeping still for more than a few moments. The tongue when protruded nearly always trembles, and this, though not in itself decisive, is a very diagnostic sign when other symptoms point to alcoholism. The breath usually smells very foul; the odour is indescribable, but highly characteristic. When such a patient tells you that he is sleepless, and vomits or retches every morning, you may be pretty sure that he is a drinker. You must not expect always to get so plain a series of indications, however; but if you find only insomnia, morning sickness, and muscular tremor (or even great restlessness), there is strong ground for suspicion; and if, besides these, you discover actual hallucinations, without any other evidences of insanity, you may almost certainly diagnose drink. You should, of course, closely question the patient as to his habits, but denial must not be much relied on.

The treatment of alcoholism in this stage is very simple, though often difficult to carry out. You have merely to enforce complete abstinence from alcohol, and at the same time administer from three to six grains of quinine daily; and if your patient will adhere to your directions, he will speedily lose all his nervous troubles. Sometimes the insomnia may for a time continue, or even be much aggravated. If you are driven to the use of any hypnotic, hydrate of chloral (twenty to thirty grains), or bromide of potassium (thirty to forty grains), is infinitely better as a sleeping dose than any of the more direct narcotics.

The case is much more serious and intractable when there are signs of great failure of muscular power, especially in the form of threatening paraplegia with lesions of sensation in the lower extremities. Equally formidable is the occurrence of epileptiform convulsion: but do not confound the mere provocation of a fit, in a person previously disposed to epilepsy by a drunken bout, with epileptic fits occurring in a chronic toper not otherwise predisposed to them; it is the latter which is of grave, indeed, well-nigh hopeless, prognosis. There is a symptom which I have several times met with, and which has always proved the forerunner of some grave mischief in the nervous centres: it is a sensation (which may be felt either in walking, or sitting, or lying down) as if the patient were suddenly falling down a precipice. In several instances I have known this followed quickly by epileptiform attacks, going on either to cerebral hæmorrhage or softening, or to melancholic insanity passing rapidly to dementia. In reference to the latter, it is an ominous fact if the patient exhibit intense depression and suspiciousness, with disposition to reject all food, and with impulse to suicide.

In the downward course which the irreclaimable chronic toper follows, there are certain signs, very important for you to know, of the effect which is being produced on the organism generally. When alcohol has come to make a deep and lasting modification in the

life of the tissues, it produces not merely the appearance, but the physiological reality, of premature old age. This is shown by the early occurrence of grey hair in a person with whose family early greyness is not usual; but far more markedly by the premature occurrence of the senile changes by which the arteries lose their elasticity and become hard and cord-like. When you find that an intemperate man of not more than forty-five years has radial arteries that roll under the finger like whipcord, remember that the chance of a sudden occurrence of one of the worst accidents of alcoholism—such as cerebral hæmorrhage, cerebral softening, &c.—is immensely increased by that fact. Similarly grave is the intimation conveyed by the appearance of the signs—though these can rarely be counted absolute—of fatty degeneration of heart or liver; in the kidneys this change may sometimes be diagnosed with physical certainty, but it is rare. The especial danger here is, that in case of an attack of delirium tremens, or of any intercurrent acute disease, such as fever or pneumonia, the heart may succumb, or the kidneys may give up working altogether.

And here I introduce what you will wonder that I have delayed so long—the description of delirium tremens. Formerly it was a universal, and it is still a common custom, to regard this disease as the characteristic event in the nervous life of drunkards; but it is now known to bear but small importance in comparison with the long train of chronic nervous symptoms which make up the picture of chronic alcoholism. Formerly it was supposed that delirium tremens was the inevitable result of temporary abstinence after habits of drinking—"the system lost its accustomed stimulus." Both these ideas were quite wrong. Delirium tremens may never occur—never does occur in the vast majority even of excessive drunkards; and its outbreak is not caused by the abstinence, but the abstinence is a symptom of the outbreak: moreover, many patients do not abstain, but drink on into the height of delirium. All one can say

is that in a certain (not large) percentage of people who drink heavily, the course of chronic symptoms occasionally culminates in an attack of delirium tremens. There are so many classical pictures of this disorder to be found in medical works that you must read, that I shall be brief in my account of it. The essential facts in its commencement are—(1) that insomnia becomes complete, and mental and bodily restlessness extreme and unceasing; (2) that hallucinations of vision become distinct and constant (coils of wriggling snakes, legions of cockroaches or rats, armed enemies threatening, and so on); and (3) that appetite usually entirely ceases—the appetite for food nearly always, that for drink in many cases. After two or three days of this state the profound exhaustion brings about a new development of the symptoms; there are now rapid pulse, rolling eyes, incessant talking, and wild terror of manner; the hands are either violently tremulous, or are constantly busy in seeking spectral objects on the bed-clothes, or pushing away threatening monsters, &c.; the skin is bathed in sweat, and the tongue is protruded with a semi-choreic jerk.

Now the important thing for you to remember is, that all this alarming train of symptoms would—bar accidents—subside spontaneously. In about three days from the outbreak of the acuter symptoms, or perhaps a week from the first occurrence of total insomnia and spectral illusions, the average delirium tremens patient will get his first sleep, and from that moment rapidly convalesce, *provided he has been kept entirely without alcohol, and has been fairly fed, and provided that no violent attempts have been made to narcotise him with opium.* However, it is not necessary now—days to let the attack run so long a course, for in hydrate of chloral\* we possess a remedy which we may safely give, with boldness, to procure sleep,

whereas opium was never safe when given boldly. We administer chloral in a single dose of thirty grains, and if sleep does not occur within an hour we give a second thirty grains; and it is rare indeed that the patient does not get two or three hours of sound repose, sometimes much more. It is best then to intermit the remedy for a time for fear of depressing the heart too much; but there is a great tolerance for chloral in this disease, and most patients will bear as much as ninety to 120 grains (in divided doses) daily, for a day or two, the longest period for which it will be needed. Meantime the patient must be sedulously fed with the most nourishing things he can be got to take, in small quantities—milk; small pieces of underdone chop or steak if he will have them; but if his stomach will not stand this he may have Liebig's soup thickened with vegetables. If we are driven to very small quantities, however, nothing equals this jelly:—Lean beef fillet, 3 lb.; lean veal, 3 lb.; lean mutton, 3 lb.; cut up small and put into a saucepan *with no water*; simmer (never boiling) by the side of the fire for eight hours; strain the liquid (from a small quantity of tasteless insoluble fibre that remains) and let it jelly into a soft mass. This is an immensely concentrated *meat*, minus very little but the water which has been driven off; a teaspoonful or two of it is a wonderful support, and can be taken every hour with ease. The moment you are called to a delirium tremens case, order such a jelly to be made, unless the appetite for solids exists in fair amount.

Such is an average case and its treatment. Now let us speak of the "accidents," which, I hinted, may give delirium tremens a graver turn.

You will understand that the advanced periods of life, especially when drinking has long gone on, are unfavourable; and here it is not always possible to entirely cut off the patient's alcohol. Be guarded with your prognosis in all cases where the patient is old, either in actual years or by physiological degeneration from drink,

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\* Where there is any tendency to epileptiform convulsion, I prefer bromide of potassium—twenty grains every two hours.

and be incessantly watchful for symptoms of failing heart, of urinary suppression, or of pneumonia. As to the heart, I recommend you never to trust to feeling the pulse with the finger; listen frequently with the stethoscope, to make sure as to the frequency, and to test the clearness and strength of the first sound at the base; also employ the sphygmograph. As to the latter most important instrument, I refer you, for lack of space, to what I have said elsewhere.\* I would just say that whenever the radial pulse is rapid and feeble, the sphygmograph is *essential* to a true estimate of the heart's condition, and unless prepared by it, you may be horrified by an unexpected sudden death just when all seemed going well.

As to the kidneys, be exceedingly particular in ascertaining whether they are continuing to act properly, and repeatedly test the urine to see if it be albuminous or bloody, and use the microscope to see if there are any tube casts. The occurrence of convulsions or coma will nearly always be found to depend on uræmia.

As to the lungs, examine them constantly, for alcoholic pneumonia may steal on with scarcely a warning sign, and prove rapidly fatal.

In the case of failing heart, as shown either by faintness and lividity of face, or by the irregularly undulating† character of the pulse, your only resource is free stimulation. I do not recommend brandy, but, where possible, the more generous old wines which are full of volatile ethers; one ounce and a half of such port as 1858, or 1847, or 1844, (not to mention such rarities as 1834!) given every hour, may tide the patient through the dangerous crisis. Sometimes you may get the required stimulant effect by half-drachm doses of sulphuric ether suspended in mucilage; but often the stomach won't tolerate this. Hot

mustard epithems to the chest may help somewhat.

In case of failing kidneys, with the signs of commencing uræmia, you must try to restore secretion by hot fomentation and dry cupping to the loins, and the use of infusion of digitalis in half-ounce doses every three hours. Don't give stimulants by mere routine, but watch the pulse, and, if necessary, give an occasional dessert-spoonful of brandy in water. Hot foot-baths are sometimes very useful.

The complication of delirium tremens with pneumonia is a very fatal one; only a very few cases recover. You can but immediately commence the administration of carbonate of ammonia in five-grain doses every two hours, and good port wine one to two ounces every two hours. Nothing else offers so good a chance.

There is yet another clinical development of chronic alcoholism, of which I should hesitate to speak with confidence were it not for the very interesting observations communicated by Dr. Dickinson in his recent paper\* on the Post-mortem Changes observed in Persons connected with the Liquor Trade. I have for some time past been almost convinced, and I am now well assured, that a certain small proportion of cases show symptoms of genuine meningitis, resembling the type of the so-called cerebro-spinal meningitis. In these cases the patient, after drinking for some time more heavily than usual, is attacked with violent headache, severe pain in the back of the neck and limbs, and slight convulsive twitchings of the muscles, and passes quickly into a state of fever with delirium. The temperature runs as high as 104 deg. or 105 deg., sometimes for three or four days together; but the symptoms then, in every case that I have seen, subside, leaving only profound debility, which lasts for some time.

In concluding this subject, we have to speak of the pathology of alcoholism as it affects the nervous sys-

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\* Article "Alcoholism," Reynolds's System of Medicine, vol. ii.

† See the diagram in my article in Reynolds's System.

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\* Vide the *Lancet*, Nov. 2nd, 1872.

tem, and it is also necessary to notice its effect upon some of the non-nervous organs, which some readers of this lecture may think should have been already prominently brought forward.

As regards the nervous centres, unquestionably the most frequent variety of lesion is an atrophy of the true nervous elements combined with excessive development of the connective-tissue elements. In the brain we find in old drinkers a general shrinking of the cerebral mass, a flattening of the convolutions, and an effusion of serous fluid into the ventricles and the arachnoid space. Moreover, microscopic sections show that the same atrophy extends to the individual nervous elements of the centres, while the connective tissue is everywhere thickened. Besides the development of fibroid connective tissue, there is much granular fat, representing the destruction of the nervous elements. Some of the commonest and most conspicuous changes are seen in the dura mater, especially in the neighbourhood of the longitudinal sinus; here the characters are those of a true inflammation, although in old subjects of alcoholism it may be difficult to trace the features of the original process. That original process was of the nature of a neo-membranous inflammation, which expended itself in hyperæmia and exudation of cells on the free surface of the membrane; the new formation being traversed with vessels. Less common are inflammatory affections of the pia mater; here we occasionally meet not merely with the remnants of adhesive inflammation, but also with scattered suppurations, the effusions of pus chiefly following the lines of the vessels. This, however, must be considered an altogether exceptional event.

But, of all the elements of the nervous centres, the most constantly affected are the smaller arteries and the capillaries. In cases of drink of any standing these are markedly affected with atheroma. In many cases the adventitia, or sheathing membrane, is distended with the remnants of effused blood and its external

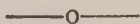
surface surrounded with heaps of minute oil-globules. Moreover, at particular points in the course of a vessel, the surrounding nervous tissues are dotted with punctiform hæmorrhages.

The above description of the pathological changes found more especially in the brain and medulla oblongata will need to be supplemented with various details when we come to speak of the local diseases of the brain; at present it will be enough to summarise the general result as follows. The unvarying effect of continuous impregnation of the blood supplied to the brain with considerable percentages of alcohol are, degeneration and atrophy of the vessels, thickening of the connective-tissue elements, and, in the smaller number of cases, inflammation of the membranes, which in the case of the dura mater tends to be limited in extent, but in that of the pia mater may be diffused over a considerable surface; but in all cases there is a conspicuous atrophy of the true nervous elements, more especially of the vesicular matter.

When we consider the changes in the nervous centres as a part of the general morbid changes induced throughout the body by alcohol, we find that the former stand in a peculiarly prominent position. Although there are several organs—such as the stomach, the liver, the heart, and the lungs—which stand more directly in the path of alcohol as it is absorbed into the circulation, the virulence of the poison is much more constantly and powerfully exerted upon the nervous centres than upon other viscera. In fact, with the exception of the effects of very concentrated alcohol on the mucous membrane of the stomach, the graver changes that have been described are almost peculiar to the nervous centres. Throughout the body there is a tendency to degeneration of arteries, and to a certain amount of sclerotic atrophy and of fatty degeneration of tissues, but the nervous system stands the full brunt of the poison, and suffers by far the most serious changes—a circumstance which we must attribute to some peculiar attraction between the ner-

vous element and alcohol. Thus the morbid anatomy of alcoholism perfectly corresponds with the clinical phenomena, for the direct effects of drink are at least ten times as frequently manifested in nervous disturbance as in those diseases of other

organs, not excluding cirrhosis of the liver, which are commonly associated with drink in the popular medical ideas. Alcoholism, as a disease of the nervous centres, has a unity and importance of its own.—*Lancet*, Nov. 9.



## QUESTIONS IN REGARD TO ALCOHOLIC STIMULANTS.

BY CHARLES W. EARLE, M.D.

(Read before the Chicago Medical Society.)\*

THE condition known as alcoholism is produced by certain causes. These causes are *exciting* or *predisposing*. The exciting cause, which is by far the most frequent, and really the only one, is the circulation of blood highly charged with alcohol, affecting first and primarily the cerebro-spinal centres.

As the habit becomes confirmed, probably not an organ or tissue of the body escapes the deleterious effects of the article. The effect of alcohol on the nervous system, as we now understand it, and the manner in which it damages the other tissues through this, I hope to bring out in another part of this paper.

Of predisposing causes, I place at the head of the list anything which tempts a person to take alcoholic stimulants:—prostrating diseases, which reduce the system to an abnormal condition, in the course of which disease stimulants may have been prescribed; occupations of all kinds which expose the person to the extremes of heat and cold; which prevent sleep at the proper time; which surround the man with an atmosphere

filled with noxious vapours, or impurities of any kind.

That occupation which renders night-work necessary I regard as most dangerous to one who has ever used alcoholic stimulants. It is exceedingly difficult for one to reform who is engaged in this kind of work; and I would most earnestly advise that man who is trying to stop the use of alcoholic stimulants to change his occupation, so that whatever of work he has to do may be done during the day.

Of one thousand men admitted to the Washingtonian Home of Chicago, since 1865 to date, December, 1872, fourteen per cent. have been men whose work has been largely done during the night. Their occupations are as follows, enumerated according to the frequency of admissions:—printers, travelling men, actors, editors, railroad men.

A large number of printers, at one time and another, are engaged on morning papers, working most of the night. Travelling men, or agents, very often sell goods during the day, and make the next business centre during the night. The actor always works till late; while the work of editors and railroad men, in many cases, is constant and exhaustive night labour. Combined with this, these men, in many instances, are deprived of home influence, have an irregular and changeable diet, and are exposed to all the vicissitudes of weather.

\* This article was also read before the inmates of the Washingtonian Home, who, believing that it would do good to any wishing to reform, unanimously requested its publication. This will account for the exhortations at the close of the article. It is also believed to contain some things of interest to the profession.—THE AUTHOR.

On the other hand, however, of one thousand men admitted to the same institution, but two per cent. have been carpenters. These men work from eight to ten hours during the day, have regular meals, mingle with good society, if they will select it, and sleep soundly during the night.

The effect of alcohol on the different tissues of the system has been the subject of much controversy for years. Used in large quantities it is unqualifiedly a poison, and not a food. Under ordinary circumstances, when the body is properly and sufficiently nourished, it does harm by even a moderate introduction into the system.

When, from some extraordinary circumstances, a person is exposed to severe labour or exposure, with an *insufficiency* of food, alcohol may, for a very short time, temporarily restore the powers of the body, but can never, in any way, take the place of assimilable nutriment.

In the treatment of disease, as a physician, I believe that occasionally the time does occur when stimulants are absolutely indispensable, and that in withholding them we commit an error just as reprehensible as it would be for a physician to prescribe a moderate amount of whisky for a period of six or eight days to every person getting over a moderate drinking bout. In rare cases alcohol does good—for a brief time. Under no circumstances or conditions can good accrue when used for any length of time.

I close my observations on this part of my subject by quoting from the testimony of Dr. Hayes, the celebrated Arctic explorer. He says:—

“While fresh animal food, and especially fat, is absolutely essential to the inhabitants and travellers in Arctic countries, alcohol is, in almost every shape, not only completely useless, but positively injurious.”\*

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\* Hayes' "Observations upon the Relations existing between Food and the Capabilities of Men to Resist Low Temperature."—*Am. Journal Med. Sciences*, July, 1859, p. 117.

The continued use of alcohol produces certain local effects on different kinds of tissue. These lesions have been clearly proven by Dr. Ogston's *post-mortem* inspections, and may be enumerated as follows:—\*

1st. The nerve-centres present the greatest change.

2nd. Change in the respiratory organs.

3rd. The liver, and other glandular organs.

4th. The heart and large arteries.

5th. The kidneys.

6th. The alimentary canal.

These abnormal changes are seen best by the microscope, and consist of accumulations of fat, of degeneration of the arteries, of induration or hardening of nerve-matter, by a state of the system in which the general nutrition of the body suffers, inducing in every respect a bad state of health, until at last we have the drunkard's *cachexia*—the drunkard's own peculiar constitution.

The *immediate* effect of alcohol on nerve-tissue is perhaps most noticeable—it certainly is in acute cases.

If you should take one of the inferior animals, chloroform it, and dissect out one of its nerves and surround it with alcohol, it would be paralysed.

Unable to transmit ordinary nerve-force, alcohol has poisoned it. The inordinate use of spirits affects the nervous tissues, as described above, in the following order:—

1st. Paralysis of spinal nerves, as shown by the impairment of muscular sense in the extremities; numbness of the integuments, &c.

2nd. Partial loss of sensibility in the integuments and mucous membrane of the face; numbness of lips; want of usual sensibility in the anterior part of the tongue. It is the trifacial or large portion of the fifth nerve now affected. The vaso-motor branch of this nerve is relaxed, as evinced by the congested and palsied condition of the face.

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\* Aitken's "Practice of Medicine," vol. i., p. 784.

3rd. The cerebral hemispheres are affected, and intellection of all kind is impaired. The man has trouble to articulate words; he can still taste; the special nerves to the tongue, such as the chorda tympani,\* and glosso-pharyngeal, to the anterior part, and the lingual of the fifth to the posterior, are intact; but the nerve of motion, the sublingual, or hypoglossal, has lost its power—has been paralysed.

Finally, the medulla oblongata is reached; breathing is laboured; the nerves absolutely necessary for the maintenance of life are affected, and at last the nerves supplying the heart are paralysed, and the scene closes—death is the result.†

This, gentlemen, is the immediate effect of alcohol as a poison. Of course, not every one who uses the article moderately arrives at this dire result. I have depicted its immediate result as a poison. In many people the effect of a *small* amount of whisky is far from paralysing. They talk more rapidly, and louder than ever before. They are capable of doing a large amount of physical labour, and endure, for a short time, almost any fatigue or exposure. The permanent effect on the tissues is being made, however, and sooner or later, in some disease of the respiratory organs—in some gland, in the heart or kidneys, and rarely in the alimentary canal—it becomes manifest.

It is the popular notion that the stomach becomes diseased very early in a subject of alcoholism. Persons addicted to the use of stimulants are sometimes seized with a sort of mania, and imagine their stomachs are ulcerated and eaten. This I believe to be rarely the case. The mucus membrane of the stomach may, and does, become congested; the walls of the stomach may become thickened, but rarely ulcerated or eaten. The poison acts on other tissues more important, the disinte-

gration of which cause the frightful train of diseases, which I have already mentioned.

Inebriation, delirium tremens, mania a potu, and alcoholism—all very vague terms—convey to us the condition in which a man or woman is found during the use, or after the suspension, of alcoholic stimulants.

Delirium tremens is defined by a majority of the authors as an affection *following* the withdrawal of alcoholic drink or other stimulants. I have not been satisfied with this definition since I have more especially studied this particular disease. Unless I am very much mistaken, delirium tremens oft-times overtakes its victim in the midst of his excesses, while the system is saturated with the vile compound, and replenished with frequent and liberal potations. Upon looking up the literature of the subject, I find that my idea in this respect is not at all original, as a Dr. Ware, in 1831, placed the same on record; and Reynolds, in his "System of Medicine," quotes from him, and evidently accepts the same.

Flint says it is a mooted question—and both explanations are correct—the disease sometimes making its appearance when the customary stimulant is suspended, and at other times, notwithstanding the continued use of the habitual amount of alcohol.

This is the first question to which I wish to call the attention of the Society. It is important to us in the treatment of our patients. It is important to the patient. The physician who believes delirium tremens the result of the withdrawal of the accustomed stimulant will be very apt to prescribe it, while the patient who shares in this belief will very likely either treat himself, or be treated by his friends, with a liberal amount of whisky for several days following the acute attack.

Any theory advanced by one not accustomed to the use of stimulants must fall to the ground when we have the testimony of those perfectly competent, who speak from experience.

The writer of this article has had the opportunity to receive from gentlemen of high culture, speaking from

\* See Flint's "Physiology," vol. iv. p. 156.

† See article on Alcoholism in Reynolds' "System of Medicine."

experience, ample testimony on this point.

It is unmistakably correct that the condition known as delirium tremens is not always due to the withdrawal of the stimulant. It makes its appearance at times when the system is fully charged with the poison — indeed, while the stomach is being replenished — and at other times after the absolute withdrawal, be it voluntary or otherwise, on the part of the individual.

It is not the diseased condition alone with which we find a man accustomed to the habitual use of intoxicating drink the unfortunate subject, that we have to do; neither does it suffice for us to find its physiological place; there are other questions, important to every inhabitant of our land, which must be considered.

Why do men drink? Is this habit, which becomes the ruin of so many young men, blasts the hopes of families, and threatens the safety of our country *hereditary*? or is it a disease?

Can a man drink all his lifetime and say that he cannot help it, because his parents used whisky?

Should a man be permitted to become intoxicated every few days, and be taught that he has no responsibility in the matter, because he has a disease?

Is it right for the medical profession, for the ministry, for all the charitably disposed people, to maintain that after a person has indulged himself with whisky or tobacco for years, until he feels uncomfortable when not under its effect, that the man has a disease, which should be treated by some medicinal agent?

To all of these questions, at present, I say no.

During the past few years it has been quite popular to speak of those addicted to the use of alcoholic stimulants as suffering from a disease. Eminent men in the medical profession have expressed their belief in this direction; and not a few articles have been written on Intemperance as a Disease. No one can believe more thoroughly than I do that the long-continued use of alcohol produces many lesions in various organs in

the body; but that the appetite for whisky is a disease, *sui generis*, does not seem to me rational.

A disease generally produces such an effect that its victim cannot throw it off in an instant. A person with typhoid fever cannot throw it from his system in a day; nor can the victim of consumption, worn down by it for years, by a simple effort of the will change his entire constitution and become a sound man. But if a man, who for twenty-five years has not been free from the influence of liquor, in an hour makes up his mind that he will never again touch the article — if he will take the trouble to sever himself from his old associates, and not run headlong into temptation — he will soon be free from the so-called disease. This is certainly totally unlike any other disease with which I am familiar.

Again, persons afflicted with a disease generally are conscious of it. They believe and are conscious that they have some physical difficulty. But a man who truly and honestly wishes to reform from the use of alcoholic stimulants, and is willing to abandon his whisky associates, and earnestly desires to become better in every way, will not tell you that he believes himself the victim of a disease. A man, however, not fully decided as to whether he wants to reform or not, with friends anxious to conceal his habit, and to furnish an excuse for him when he does break out, will very eagerly conclude with any one that it is a terrible disease.

The effect of alcohol on the tissues is *most damaging*. The appetite becomes terrific. But, gentlemen, I have yet to see the man who, having candidly and prayerfully made up his mind to stop the habit, who is willing to keep away from saloons, and from those who would entice him to drink, that cannot reform.

If it was a disease, a man who had indulged in the habit for years and years, but who was willing to conform to the resolutions indicated, would have infinitely harder work to reform than one who had drunk but a month. And yet we see men, who have been addicted to the habit for years, reform

—stop at once—while the man who has been a drunkard but for a month yields to the seductive glass time after time.

This does not act to me like a disease. The difference is just here. One man makes up his mind fairly and squarely that he will stop—avoids his former companions, shuns saloons, and in every respect tries to become a better and wiser man; the other does not make up his mind that he really and truly wants to reform—is not yet convinced that it is important, but will do so if convenient, or necessary to hold a situation; still mingles with associates who drink; visits saloons for cigars or mineral water, and in no respect whatever tries to become a better man—is still profane, profligate, and unruly. The one reforms; the other does not; and the one reformed has a thousand times more the disease (if there was such a thing) than the one who still persists in his course.

Such being the facts, it is very difficult for me to class either the habit of drinking or appetite for alcoholic drink as disease.

I go still further: I do not believe that the habit of drinking, or the appetite for alcohol, is transmitted by our ancestors. And yet a great many people do believe this; and the remark has been made to me that it was “No use trying to stop drinking, for it was in the family—the father and grandfather, and as far back as the history could be traced, all drank—and it is natural for me. I can’t stop!”

Now it is undoubtedly true that a number of children of those addicted to the use of alcohol, are afflicted with insanity, become idiots, or have a tendency to epilepsy. It is also true that many children who were unfortunate in having intemperate parents, have grown up and been honest and industrious, never tasting a drop of liquor. Again, too, how many there are, raised in a family surrounded by everything calculated to make one good and true—watched by a father and mother anxious to do everything to develop a noble man—who also fall. As a general thing parents give to their offspring

certain tendencies of their own constitutions, and in some cases a diseased system. These are all indubitable facts. But it appears to me, however, in the cases we are now considering, it is not a desire or appetite, or even habit, which is inherited, but rather a peculiar nervous system, making both bodily and mental labour or trouble hard to be borne, and inducing in the subject, if his early education be neglected, a feeling for some kind of stimulus. A proper training while young, with a rigid hygienic condition, will eradicate the difficulty. Even if this is neglected, the man need not despair—a resolute will, good associates, and avoidance of everything tempting, will accomplish it.

What I have wanted to say, and place on record, in the concluding remarks of my article, is this: There is no physical cause why a man should drink intoxicating liquors; and, secondly, if a man has formed the habit, if he wants to reform he can do it.

There is something better for every man than to die a drunkard. And although the man may seem lost, the hopes and expectations of friends long since blasted, the victim and his friends completely discouraged—all this may obtain, but the man may reform. I believe it to be absolutely wrong to argue otherwise; and the doctrine that a man has some physical difficulty in the way of reformation, seems to me pernicious and dangerous in the extreme.

It has seemed to me that about five or six things were necessary for reformation:

1st. A man must thoroughly make up his mind that he wants to reform; he must mean business—*nulla vestigia retrorsum* (no steps backward).

2nd. He must come fairly to the conclusion that no back-set in business, no disappointment of any kind, is going to be for ever rectified by returning to his former habits.

3rd. He must make up his mind that, in addition to reforming from one habit, he will try to become better in every way possible.

4th. That he will avoid saloons as he would a bottomless pit.

5th. He must make up his mind to choose moral and temperate companions, avoiding those of opposite habits.

A man firmly pledged to these resolutions, thoroughly in earnest, will succeed. He must always be on his guard—not over-sanguine in his own strength, but recognising a Divine Helper, always near to the unfortunate wishing to do better.

Thus resolving and performing,

every man may go forward, gaining strength day by day; becoming more and more a man; regaining that which was lost; becoming established in the confidence of his fellow-men; bringing light and joy again to his own home; his body purified; his hopes and aspirations elevated; and the end is crowned with triumph in a perfected manhood. — *Chicago Medical Examiner*, Feb. 15.



## CHRONIC ALCOHOLISM.

(From the *Saturday Review*, January 4.)

THIS is supposed to be an age of progress, and any one that ventures to hint that the progress is not altogether in the most desirable direction must expect, we suppose, to be ridiculed and denounced as old-fashioned and reactionary. If there is one kind of progress more than another on which we pride ourselves, it is our social progress. No opportunity is lost of comparing ourselves with our benighted grandfathers or great-grandfathers, and congratulating ourselves on our delicacy and refinement of manners, as compared, or rather contrasted, with the manners of the Regency or of George III.'s time. Drunkenness, for example—how often do we hear this said!—has descended quite to the lowest classes. No gentleman gets drunk now, and even in the lowest class drunkenness is beginning to be considered discreditable. We should rather question the second of these assertions, but the first is no doubt true enough. Gentlemen certainly do not get drunk now-a-days—that is, drunk in the old sense of the term. They do not sit long after dinner, and they are always fit to join the ladies. Four-bottle men have gone the way of the dodo and the pterodactyle; and even two-bottle men—that is, men accustomed to drain their two bottles of wine at a sitting—are hardly to be met with. It is not considered necessary at a

card-party after dinner to pass a hat round, as in other days the cocked-hat went round, to assist the confused eyesight of the company in discovering the last dealer; and even in old Scotch houses a boy “to lowse the neckclothes” has ceased to be retained in the establishment. Drinking bouts are out of fashion. The consumption of wine at bachelors’ parties does not, as a rule, much exceed that at a dinner-party at which ladies are present. Even in crack regiments, which used to pride themselves on what they could go through in the way of hard drinking, the amount of wine now taken at a dinner would in the eyes of a toper of the Regency be regarded as the portion of an ascetic, barely enough to moisten the throat. And then, after dinner, there are no wild “finishes.” There can be no question, we should say, that gentlemen are now-a-days more sober in their bearing than they used to be; at least they do not drink so as to lose their heads or their legs. Admitting, however, that the scandal of open and unmistakable drunkenness has passed away from the upper and middle classes, we venture to doubt whether the drinking habits of the present time are in reality so much more sober or wholesome than those of the last or of the penultimate generation. It must not be forgotten that a man may be intoxicated without being drunk. In-

toxication simply means poisoning, and the amount of slow poisoning which is constantly going on in this way is really very terrible to any one who knows the symptoms, and who observes what is passing around him. Seventy or eighty years ago men habitually drank heavily after dinner, and it was certainly not an unusual thing to be carried drunk to bed. The carouse followed a substantial meal, and the toppers slept off their debauch. They spent a good deal of their time each day in the open air, and their work, whatever it was, did not involve close, sustained, exhausting application. It will be at once seen what an advantage they enjoyed in this respect over the men of our own day, who have comparatively little out-of-door exercise, and who have to bear the strain of intense, anxious work, and who, when they drink, drink in a way that gives the stomach no rest, and that keeps the nerves in a constantly excited state. Formerly the very grossness of the bacchanalian habits of the men revolted the women, and kept them to a great extent beyond the reach of temptation. But now ladies and gentlemen all live much more together, and the men drink so decorously and discreetly that the ladies fear no harm in following their example. But in this respect the capacity of the sexes is certainly not on an equality, as the prevalence of what are by courtesy called nervous disorders among women too painfully testifies.

We are quite ready to admit that decorum is in itself a good thing. The familiar spectacle of gentlemen speechless and staggering from the effects of heavy potations could not fail to have a degrading and brutalising effect upon the society to which they belonged. It is morally an advance that men should be ashamed of being seen in this odious and filthy condition. But decorum may be in itself a snare, and it is well that the truth, however coarse, vulgar, and unpleasant it may be, should be faced. It must be remembered that the three-bottle and four-bottle men of other days were after all exceptional men,

and a mere handful in the community, and that, although most men then thought little of getting drunk, this was with a great many an indulgence which they allowed themselves not habitually, but only on special occasions, and with intervals between. The main difference between the drinking habits of the last generation and of the present would seem to be, that formerly men, when they sat down to drink, drank more at a time, while now men drink moderately at a sitting, but in sips or "nips" drink a good deal during each day. Whether the modern habit is better than the old habit is a question which possesses only a speculative interest. The important thing is, that the modern habit should be recognised as vicious and unwholesome. We are aware that this is quite an old story now, and perhaps people may be tired of its repetition. Unfortunately the necessity for speaking of it does not appear to have diminished. About a year ago the doctors published a declaration respecting alcohol, insisting that, as a medicine, it ought to be prescribed with the same care and precision as any other powerful drug, and pointing out that its value as an article of diet was immensely overrated. The document also recommended legislation with a view to confine the use of alcohol within proper limits, and to promote habits of temperance. For our own part, we should be disposed to rely much more confidently on the personal influence of the doctors themselves than on any kind of legislation. Something may be done by legislation to enforce order and decorum in the streets and in places of common resort, and to curtail the facilities for public drinking; but, after all, this is only making clean the outside of the platter. Most reasonable persons will admit that the Licensing Act goes about as far in this direction as is practicable, if indeed it does not rather overshoot the mark. It is just because we are convinced of the powerlessness of legislation, because we distrust all violent coercive measures, and have no faith in any reform which does not spring from voluntary

restraints and an improved state of public opinion, that we feel bound once more, at the risk of wearisome iteration, to call attention to the subject. The excise returns, the statistics of criminal offences, the warnings of the doctors, the feverishness and excitement of social life, the prevalence of nervous disorders, the crowded drinking-bars, and the marked increase of the number of reeling drunkards in the streets, all point to the same conclusion. It is impossible to doubt the growing intemperance of the working classes. Personal observation on such a point may sometimes be misleading, but the same story comes from all parts of the country. As a rule, high wages seem to mean only more drinking; and drinking means wife-beating at home and fighting in the streets. Mr. Vernon Harcourt, who objects to the stringency of the Licensing Act, appears to think it necessary to argue that the country is really very temperate and sober. We have as little liking for restrictive legislation as Mr. Harcourt, but we see no use in shutting our eyes to unpleasant facts. It is necessary to distinguish between the bigotry and fanaticism of the teetotalers and the basis of truth which underlies their agitation. The evil which they denounce unhappily exists, and even their violent and distempered imaginations can hardly exaggerate its magnitude. It may be reasonable to resist the tyrannical measures which the total abstinents are anxious to impose upon the country, but it is idle to pretend that the country is in this respect in a satisfactory condition. It is scarcely a consolation to be told that the vast increase in the expenditure on intoxicating liquors is a proof of the prosperity of the nation. It is doubtful whether the present high rates of wages will be maintained; but, if they fall, the passion for stimulants which has already been developed will unfortunately remain. Anybody who reads the police reports will see the steady increase of cases of brutal assaults, especially on women, which may be traced to drinking. The present "genial" season has been

appropriately celebrated—a woman supping with her husband and a friend suddenly flung out of window, a man stabbed by his wife, a wife by her husband, a girl by her sweetheart. "Thank God Christmas is over!" we heard a poor woman say the other day as she steadied her staggering husband up the steps of a railway-station.

We are quite of one mind with the Bishop of Peterborough, that, if it is necessary to choose, freedom is better than sobriety; but it is not impossible for people to be free and sober too. The criminal statistics compiled by the police show an increase of more than forty per cent. in the convictions for drunkenness before the magistrates in England and Wales in 1871 as compared with the average of the previous ten years. The excise and customs returns show a vast increase in the consumption of all kinds of drink, and especially of spirits. The country has been thriving, wages have been high, and the surplus earnings have been spent chiefly in liquor. These are not pleasant facts, and they hardly confirm those pretty theories of social progress of which we hear so much. But progress has been said to be like a wave which sometimes seems to retire even in the course of advancing, and this may perhaps be only one of the backward movements of social improvement. As far as we can see, there is nothing to be done in the matter except to direct attention to the facts, and leave them to make their impression on the public mind. It is reserved now-a-days for the working-man to get drunk in the old way, "like a lord," but the other classes, though they bear themselves more discreetly, suffer for their potations in other ways. Brandy-and-soda, bitter ale, odd glasses of sherry, nips, and pegs, and drams, keep up a perpetual irritation and excitement, which, added to the cares and worries of business and the fatigues of social life, wear out the nerves, and are apt to end in hysteria or paralysis. The doctors, who are aware of the spreading evil, might do much to check it, and their duty in the matter was certainly not exhausted by the signing of the de-

claration a year ago. The lesson needs to be constantly and emphatically enforced. The evil should be probed to its root in neglect of sanitary and dietetic rules, and the forced pace of social, and especially of business life. The attempt to get

through ten hours' work in five or six explains, in a great measure, the craving for stimulants. People, though they have more holidays than they used to have, get less rest, and rest is what they want.



# STIMULANTS AND THE DEATH-RATE.

At a meeting of the West Derby Board of Guardians, held on Wednesday, Jan. 22, Mr. Tickle brought before the Board the following return, showing the consumption of stimulants at the Walton and Mill Road

Workhouses during the years 1871-72, with the weekly average number of inmates, cases of infectious diseases, and the proportion of deaths to the population of the houses per week:—

## WALTON.

		Average weekly Inmates.		Cost of stimulants per quarter.			Average cases of Infection.		Pro. of deaths to pop. wkly.
1871.				£	s.	d.			
Quarter ending	March	1178	...	495	4	10	...	—	1 in 147*
"	June...	1051	...	313	5	0	...	—	1 in 191*
"	Sept...	935	...	191	10	2	...	—	1 in 267
"	Dec....	943	...	62	6	2	...	—	1 in 377
1872.									
"	March	943	...	35	13	5	...	—	1 in 343
"	June...	878	...	37	13	9	...	—	1 in 351
"	Sept...	839	...	34	17	0	...	—	1 in 280
"	Dec....	895	...	38	1	9	...	—	1 in 447

\* Smallpox cases in house included in these returns.

## MILL ROAD (HOSPITAL).

1871.									
Quarter ending	March	231	...	240	13	9	...	200	1 in 19
"	June...	200	...	305	19	8	...	162	1 in 22
"	Sept...	162	...	255	0	8	...	76	1 in 36
"	Dec....	297	...	177	5	6	...	108	1 in 42
1872.									
"	March	354	...	145	8	2	...	87	1 in 67
"	June...	298	...	82	6	4	...	34	1 in 66
"	Sept...	267	...	90	4	10	...	19	1 in 59
"	Dec....	314	...	132	5	8	...	36	1 in 51

Mr. TICKLE remarked that the medical men had reduced the consumption of stimulants, both at Walton and Mill Road, since the report of the committee on the use of stimulants had been presented. He had prepared the figures because he thought it was im-

portant that the public should know the whole facts of the case, and also that the guardians might have the information for their guidance. He was gratified with the result, not only of the reduction in the use of stimulants at the Walton Workhouse, but also

the reduction in the death-rate. The master of the workhouse (Mr. Goode) and the medical officers were entitled to credit in the matter. (Hear, hear.) He did not wish to draw an unfair comparison between Walton and Mill Road, but he must say that the nurses in the latter house were apt to be indifferent and careless in the use of stimulants. There had been an increase in the use of stimulants at Mill Road recently, and that was to be guarded against. He did not necessarily connect the reduction in the death-rate with the decrease in the use of stimulants, but he brought the figures forward for the information of the Board. The figures did not include the officers.

Dr. COSTINE said the Board ought to be obliged to Mr. Tickle for having brought the matter forward, and he had no doubt his efforts had resulted in a saving to the ratepayers, and an advantage to those inside the workhouses. He thought it would be unfair to charge the medical officers with being rather lavish in the use of stimulants. Medical men had not always to treat typhus fever of the same character, and occasionally they had to use much stronger remedies and more stimulants than at other times. The great point was to see that they had first-class nurses —

women of good character, who would take care that what was ordered by the medical officers was consumed by the patients. (Hear, hear.) When comparing Walton and Mill Road, it must be borne in mind that at Walton there were not the same class of cases that were treated in Mill Road.

Mr. DAVIES said that it was only within the last twelve months that they had been able to eliminate from Walton every case of an acute nature, and place it in the Mill Road establishment, thus leaving only the senile and chronic cases at Walton. That would naturally reduce the use of stimulants at Walton. They had endeavoured to get as good a class of nurses as could be obtained, and he thought the Board had every reason to be satisfied that in both houses the stimulant question had been well looked after, having regard to the speedy recovery of the patients and to economy.

Mr. TICKLE said, that not long ago it was discovered that a nurse had not given to a patient what the doctor had ordered. The nurse had taken it herself. Abuses of that kind ought to be guarded against by the employment of able and conscientious nurses. (Hear, hear.)

The subject then dropped.—*Liverpool Mercury.*

—O—

## THE HABITUAL DRUNKARDS BILL.

(From the *Lancet* of 1st March.)

DURING the present session, Parliament will again be called upon to deal with the Habitual Drunkards Bill, which Mr. Dalrymple has once more brought forward. Its chief promoter will on this occasion be armed with the results of his personal inquiries into the treatment of habitual drunkards in America, as well as with the report of the Committee of last year; and both Houses will, by this time, have become accustomed to the sound of his proposals, and will be less likely than formerly to discover

some deep design against the "liberty of the subject" in the endeavour temporarily to seclude a few poor wretches for a time from the temptation beneath which they are so prone to fall. The Bill, as now printed, defines an habitual drunkard to be one who "in consequence of the habitual intemperate drinking of intoxicating liquor is dangerous to himself or to others, or incapable of managing his affairs; or who is three times within six months convicted in a court of summary jurisdiction of some offence or offences of

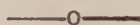
the definition whereof drunkenness forms part; for which purpose a court of summary jurisdiction may take judicial notice of previous convictions in the same court, or allow the same to be shown by such evidence as to the court seems sufficient." The remedies provided are the establishment of "licensed houses" and of "industrial hospitals," and the appointment, when needful, of a Chancery guardian for the person or property of the drunkard; the industrial hospitals being intended for the commitment of intemperate criminals, as reformatories are for juvenile offenders. The licensed houses appear to be for the non-criminal class of habitual drunkards. They must not be, at the same time, licensed for lunatics, and they may receive an inmate, being an habitual drunkard, either on his own written application or on that of his legally appointed guardian. The application of the drunkard himself must be for a specified time; and until the expiration of this time he may be detained by force, or captured and brought back if he should make his escape. There are numerous provisions for securing the proper visitation both of houses and of patients, and for preventing abuses; but these are matters into which we need not now attempt to enter. If the Bill should become law, all these clauses will be thoroughly scrutinised in committee, and the House of Commons may be fully trusted to see that all proper and necessary safeguards are provided.

When the report of the Committee was first made public, we heard a great deal in various quarters about the practical difficulties that would impede the working of such an Act as that which is now proposed. No doubt difficulties would occur, and unexpected complications would now and then arise. But difficulties and complications are the inevitable results of the imperfections of human language and of the shortcomings of human wisdom; they bristle about our path in every direction, and they never deter us from turning our steps towards any goal where it seems likely that solid advantage may be

obtained. It would be perfectly easy for an ingenious person to invent possible cases in which the proposed Act might entail misfortune or loss; but in the actual course of life the common sense of the administrators of the law would falsify predictions based upon such cobwebs as these, and would so apply the powers entrusted to them as to endeavour to avoid evil and to accomplish good. Against the general principles of the Bill there is nothing to be said, unless we admit the force of a physiological objection. We have heard it urged that habitual drunkenness depends upon physical weakness, which tends to the extinction of the weak for the good of the community; and that it is a pity to place artificial barriers, which must at best be inefficient, in order to hinder the drunkard from going to his own place. To patch him up, to restrain him, to check his downward course, to arrest the dissipation of his property, to extend the period during which he may beget inheritors of his infirmities—all these acts may be regarded as no better than futile efforts to modify an inevitable doom. There are some who think that a short shrift would be the true and only remedy for the ills that drunkenness produces, and who will look upon Mr. Dalrymple's Bill with the same feelings that would animate Sir Charles Trevelyan if he saw a benevolent lady giving alms to a professional mendicant. We are not sure that for this view there is not much to be said; but we are sure that it is too advanced for the philanthropy, whether real or sham, of this particular age in which we live. The public will demand that we deal with inebriates in a way that is at least more human, if not more humane, than the process of natural selection; and the evils of habitual intoxication are so great that it would be difficult to use exaggeration in describing them. There some eighteen thousand medical practitioners in the United Kingdom, and there is probably not one of them whose experience would not furnish him with at least one instance of innocent persons being brought to disgrace, poverty, or suffering, by the

drunkenness of some member of the family to which they belonged. The nurse is one from which neither sex nor rank affords exemption, and it imperatively calls for the interference of the Legislature. The law is so powerful an educator that the mere treatment of habitual drunkenness as a grave criminal offence would do much to change the indifference with which it is now so often regarded. Mr. Dal-

rymple will, doubtless, have opponents; but his opponents are bound, we think, at least to meet his proposals by some attempt of their own to grapple with the evils that he has so ably exposed. From argumentative opposition he has probably little to fear; and the chief danger to his Bill is that it may be submerged and lost in the unclean turmoil of party politics.



### MOSELLE WINE IN RENAL DISEASES.

For the last ten years it has been a common habit among London physicians to prescribe Moselle wine, both "still" and "sparkling," for their gouty and rheumatic patients; particularly when they exhibit a disposition to the formation of calculus. To say that this habit never had any rational foundation, is only to say what may be said with equal truth of nearly all alcoholic prescriptions; but in this case the completeness of the illusion is so apparent that it is hard to see how it ever obtained a moment's currency among a profession with the smallest pretension to be called "learned." Probably in this case, as in too many others, the supposed virtues of the wine have been taken for granted from the circulars of interested wine dealers, who are always ready to pay a liberal fee for a little high-sounding medical jargon wherewith to give a pseudo-scientific appearance to their trade advertisements. At all events the following quotation from the recent work of Doctors Thudichum and Dupré upon "The Nature and Use of Wine," will show that if nobody has contrived to fool the doctors, the doctors have succeeded in very seriously fooling their patients. It should be noted, in reading these remarks of Doctors Thudichum and Dupré, that these gentlemen are in no way the advocates of abstinence. Their work is written in the interest of the producers, dealers and consumers of wine; and nothing

would perhaps disappoint them more than to find that they had been instrumental in diminishing the consumption of wine in this country:—

"The general character of Moselle wine is that of thin Rhine wine, but it never has as much flavour as even the thinnest of those wines. Owing to this natural want of flavour the producers of Moselle, and the merchants in their track, have devised an artificial flavour, which imitates, to a certain extent, the flavour of wine made from the Muscatel grape. This is the tincture of the flowers of the elder shrub. Of this tincture, or 'essence of muscatel,' large quantities are made along the Rhine and Moselle, and used for the production of the peculiar bouquet, particularly in 'sparkling Moselle.' Of this tincture a small quantity is added to common Rhine wine or Moselle, whereupon it assumes the peculiar flavour which any one conversant with the process of its production recognises at once. must be declared with emphasis, that there is not a grape of Muscatel grown upon the Moselle fit for wine-making; that there is not a single barrel of wine made there which naturally has the Muscatel flavour, and that all the wine having the flavour which imitates it is made up with a tincture of elder-flowers. It is a singular circumstance that, with the production of such a mass of undrinkable liquid, the Moselle should nevertheless have obtained the reputation for good wine,

and that particularly in England; while in Germany few persons would drink Moselle as a matter of choice, but only as a matter of economy. Some persons no doubt drink Moselle wines from a kind of tradition, which can only have been the result of the importation of wines from a few of the best situations in times gone by. Others drink it at the bidding of their medical advisers, which may be judicious provided it is based upon better arguments than the recommendation of Dr. Meurer. This author thinks that 'the undeniable fact of longevity amongst the inhabitants of the Moselle district may well be considered a convincing proof of the excellency of its wines;' of course this 'undeniable fact' is not based upon any statistics, and consequently the

impression which the sentence would convey, that the average duration of life among the inhabitants of the Moselle valley was longer than elsewhere might be quite erroneous. But even if it were so, new proof would be required to show that this had any connection whatever with wine-drinking. No such proof has been furnished by the doctor, and we venture to believe never will be forthcoming. Having assured us that 'stone and similar diseases' are entirely unknown in the Moselle district, Dr. Meurer maintains that they could be cured by Moselle wine. For the floating of this assertion he evidently calculated upon the lay public, for every medical reader would repudiate it, and declare it a baseless absurdity."—Pp. 583-4.



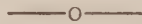
## PUBLIC-HOUSES AND THE DEATH-RATE.

THE Sanitary and Social Economy Section of the Philosophical Society of Glasgow met in January last, when Mr. Kenneth M. M'Leod, city sanitary officer, said, It can be clearly proved that the more numerous public-houses are in a locality, so also are the cases of disease and death. Saltmarket-street has 18 public-houses to a population of 2,885, being one public-house for every 157 persons. In the year 1871 this street yielded 256 cases of fever, exclusive of small-pox, being one in every 11 persons. The deaths from all causes numbered 158, being one out of every 18. High-street has 29 public-houses to a population of 7,475, being one to every 257 persons. There were 458 cases of fever, being one in every 16 persons. The deaths numbered 353, being one in every 21 persons, showing a decrease in both fever and death-rates proportionate to the smaller number of public-houses to population. Bridgegate has 12 public-houses, with a population of 2,480, being one public-house for every 206 persons. 206 were affected with fever, being one to every 12 persons.

There were 110 deaths, being one in every 22 of the population, still showing a rise in the rate proportionate to excess of dramshops. Drygate-street and Lane, with the same class of people, contain a population of 3,460, with only 5 public-houses, being one for every 692 persons, and that street and lane only yielded 83 cases of fever, being one in every 42 persons. There were 106 deaths, being one in every 32 persons, showing a fever-rate nearly four times and a death-rate two times less than is found in Saltmarket-street, where the whisky shops abound. King-street, City, is still more striking. There is one public-house for every 92 people residing therein, and every eighth person in that street was struck down with fever in 1871. Now, let me try this question by another test. The city, for police and sanitary purposes, is divided into five districts. The central district contains an estimated population of 77,720, and has 431 retail spirit shops, being one for every 180 of the population. In the year 1871 there were 3,387 cases of

fever, being one in every 22 persons. The deaths from all causes numbered 3,234, being one in every 24 persons. The eastern district contains a population of 132,506, and 316 public-houses, being one for every 418 persons. The cases of fever numbered 1,635, being one in every 81 persons, and the deaths 3,797, being one in every 34 of population. The northern district contains a population of 112,669, and 215 public-houses, being one to every 524 persons. The cases of fever numbered 1,121, being one case in every 100 persons. The deaths numbered 4,177, being one in every 27 persons. The southern district contains a population of 105,216, and 295 public-houses, being one for every 356 persons. There were 1,245 cases of fever, being one in every 84 persons. The deaths numbered 3,093, being one in every 34 of the population. The western district contains a population of 76,497, and 200 public-houses, being

one to every 382 persons. There were 641 cases of fever, being one to every 119 persons. The deaths numbered 1,955, being one to every 39 of population. I had occasion the other day to look into the records of death, and of 19 infants under five years, who died in a well-known street in the older part of the city within the last thirteen weeks, I found the parents of fourteen of that number reported intemperate in their habits—a fact which, in some measure, explains the cause of the Glasgow death-rate, and infantile mortality. In the year 1871 there were 49,948 persons taken into custody by the police for disorderly conduct, being drunk and incapable, for simple assault, and obstructing the police; showing that 136 of our fellow-citizens, after paying their devotions to the houses we have named, daily require the guidance and fostering care of our police.



## THE ACTION OF ALCOHOL.

(To the Editor of the *British Medical Journal*.)

SIR,—In a leading article of one of the late numbers of your journal, referring to the use of alcohol, you took occasion to urge the desirability of investigations being made on the subject in the large hospitals. I certainly agree with you in thinking that there is plenty of room for improvement of our knowledge concerning alcoholic stimulants. There are constantly a large number of patients taking wine, who would be much better without it.

I was much struck, last spring, with the effect of wine on myself, as a patient. I had just emerged from enteric fever, and, there being all the indications for its use, I was ordered, and took wine. Now, instead of benefiting me, it seemed to do just the reverse. I took two glasses during the twenty-four hours. It stimulated in a remarkable manner the heart's

action, and always produced, more or less, a feeling of cold; which latter effect is interesting, as showing that wine influences the contractility of the minute as well as of the large vessels, although probably it is indirectly through the nervous system. But that such stimulation was unnecessary, and indeed injurious, appeared from the fact that, when I went out and walked a few miles, after taking a glass of wine, a cold perspiration would break out generally, and a feeling of exhaustion come on, compelling me often to sit down at the road side during my walk; whereas, going to see the same patient another day before taking the stimulant, I felt quite another being. All the time that I was taking wine, for two months after I got out of bed, my pulse could not be coaxed below 120. But, at the end of this period, I stopped the wine;

and from that time I date my satisfactory convalescence. I soon noticed a lowering of the pulse; and certainly, before a fortnight passed, it was down at seventy-two, and faintness and other disagreeable symptoms belonged to the past. My pulse soon came down to sixty, which is my normal number.

Now, I cannot but think that the wine materially retarded my recovery. I had been brought down considerably during the acuteness of the disease; and, perhaps, the tissues required repose and filling up, rather than to be stimulated to change by wine. I should not wonder if, before long, the use of wine as a remedial agent should be confined almost entirely to urgent

cases of flagging of the heart's power, and certain cases of passive congestion, such as often occur in fever.

I will only add, that some of the symptoms in my case coincided with those observed by Dr. Parkes in his recent experiments. But with regard to the latter, is there not a source of fallacy attached to them? How can the quantity of urea excreted, for instances, be taken as a true criterion of the degree of metamorphosis of the tissues, seeing that urea is derived as well from the raw unassimilated albumen in the blood as from the fixed nitrogenous tissues?

I am, &c.,

CHARLES MACLEAN.

Applecross, December, 1872.



## Notes and Extracts.



**A DELICATE PAUPER.**—A pauper at the Woolwich Workhouse, suffering from "sunstroke, together with delirium tremens" (we quote from a lay contemporary), had been receiving by the order of the medical officer a pint of champagne a day. The fact was officially brought before the notice of the guardians at their last meeting, and they, after mature deliberation, determined to transfer their interesting but costly *protégé* to Birkenhead, his native town.—*Lancet*, March 8.

**BEER IN WORKHOUSES.**—The publication of the Parliamentary Return relating to the consumption of alcoholic liquors in workhouses, which was moved for last session, has been unexpectedly delayed. The Sanitary Committee of St. George's, Hanover Square, have recommended that no beer be given to an inmate of the workhouse, except by the order of the medical officer. At St. George's-in-the-East, Dr. Belcher has strenuously opposed the unanimous wish of the guardians to give an allowance of beer

to paupers who work as tailors, shoemakers, &c.

**DRUNKEN MEDICAL ASSISTANTS.**—"Delta" writes thus to the *British Medical Journal* (March 8):—"In a period extending over twenty years of practice, I have found that one of the most grievous annoyances possible for a medical man to endure is that of having a drunken assistant. I think the matter of so grave a character in connection with the whole medical world, that I am induced to suggest a remedy which, I think, will be found to be efficient. Let every medical man, in referring to an assistant's last employer, put the question plainly—Is he drunken, or an habitual drunkard? Let every medical man honourably answer yes or no. Thus the truth would be learned, and an efficient stop put to one of the principal miseries which medical men suffer, for the drunkard would soon find that he could get no one to employ him."

**HEART DISEASE AMONG SEAMEN.**—Mr. Nathan, assistant-surgeon of the Royal Naval Hospital at Haslar,

reports 1,572 cases of disease of the heart admitted into that hospital in the year 1871, and states that from the yearly entries for the last ten years heart disease appears to be on the increase in the Royal Naval Service. Among the probable reasons for this increase he mentions the system of weekly payments in the Marine divisions, giving the men more opportunity for a complete debauch. The men most frequently mention heavy-gun drill as productive of the disease; but there may be more than one cause in operation. Tobacco, alcohol, and dissipation may be the combined agents in one case; cachexia the predisposing, and heavy drills the exciting cause in another; dyspepsia and debility in a third. On the whole, Mr. Nathan comes to the conclusion that one of the greatest steps towards the diminishing of heart disease in the naval service would be an earnest endeavour to improve the morals of the men, and save them from the excess in spirituous liquors, tobacco, and dissipation, in which they are apt to indulge.

A MAN WHO THOUGHT HE WAS TEMPERATE.—In a recent clinical lecture at the London Hospital, Dr. Andrew Clark called the attention of the students to a case of renal disease. "The man," he said, "is forty-eight years of age, fair, well-built, moderately stout, and very intelligent. He is a cellarman, and has 'lived well,' but, as he adds, temperately. This is found to mean that he is a hearty eater of animal food, and that his daily consumption of alcohol averages about two quarts of beer, an occasional 'drop' of brandy in water, and three or four glasses of any sort of wine. But he has never been 'the worse for liquor'; and until eight years ago, although taking little exercise, and following his occupation almost entirely underground, he enjoyed uninterrupted health. Even now, an ordinary look at the man returns no impression of serious illness. It is only the close scrutiny of an experienced eye which detects in the patchy red and yellow of his face, in his pinched features, in his

careworn expression, in his tremulous excitable manner, and in his movements shorn of the freedom characteristic of health, the signs of an organism somehow ill at ease."

THE PRIMATE ON ALCOHOLISM.—The Protestant Archbishop of Canterbury and the Catholic Archbishop of Westminster have been vying with each other in preaching a crusade against intemperance. We wish all success to their labours, and look to them for co-operation and support when Mr. Dalrymple's Habitual Drunkards' Bill comes before Parliament. The clergy have done admirable service in the good cause hitherto, Catholics like Father Mathew and Presbyterians like Dr. Guthrie being ever in the front for repressing drunkenness. The Lower House of Convocation has furnished, through its Committee on Intemperance, a valuable report on the prevalence of the vice and the best means of abating it; while the General Assembly of the Church of Scotland has been equally active in dealing with the besetting sin of that country. It is pleasant to see the Church lending her powerful aid to the furtherance of a great sanitary object; and her success in the work should convince her that in other matters affecting the public welfare she can render most effective assistance to the general practitioner and the health officer. The working curate, if adequately informed in the elementary laws of hygiene, has opportunities of observation which might be of paramount service to the Local Government Board.—*Lancet*, March 15.

BRANDY IN THE WORKHOUSE.—At a recent meeting of the Mile End Old Town Board of Guardians, according to a local paper, "the clerk read a report from the visiting committee stating that they had considered the question referred to them as to the large increase in the consumption of brandy during the quarter ending Michaelmas, and having examined the relief list, and been attended by the medical officer and others, they found that the increased consumption arose in the workhouse infirmary, there having been twenty-

nine patients to whom during the quarter 1,139 glasses of brandy had been given. Mr. Haddesley, the medical officer, stated by way of explanation, that the brandy, when ordered by him, was continued to each patient longer than he had intended in consequence of an oversight on his part in not stating in the indoor medical book when the brandy so ordered was to cease, and hence the large consumption. He added that since his attention was drawn to the subject he had been more careful, and that the mistake would not occur again. In the course of conversation, it appeared that the glasses in question were 2½-ounce glasses, or half-quartens, and great dissatisfaction was expressed at the neglect of the officer in not writing the patients off the list; for if attention had not been called to the matter, the doses might have been administered till now, or two years hence, provided they did not succumb under the infliction. No action was taken in the matter."

#### THE HABITUAL DRUNKARDS BILL.

—In consequence of the Government defeat on the Irish University Bill, the House of Commons did not meet on Wednesday, 12th March, and the Habitual Drunkards Bill, which stood on the paper for a second reading on that day, was of course postponed. "A Country Clergyman," writing to the *Echo*, says:—"Much do I shrink from writing this letter, and laying bare a cruel social sore, but when my sad tale is told you will see how obvious my reason is. I have an only sister, who has been lying at the gates of death. About a fortnight since, at the very crisis of her illness, I visited her; her husband's habits were but too well known; but little did I think to see him intoxicated at such a time; but such was the case. I reproached him with it. 'Good God,' he said, 'do you think it possible? It is the grief that is making me appear so.' Then he added, 'I took a little eau-de-cologne.' This was the eau-de-cologne sent to bathe his sinking wife's fevered brow. He swore, he vowed, he promised to take no more, but next day, when I returned, he was worse and

every day since, while his wife was lying unconscious, he has been furiously drunk. On Sunday he went out and begged drink amongst his neighbours, and his little son of thirteen came to me, asking, 'Can nothing be done to stop papa?' His little daughter hides herself, while he forces the other children to bring him whisky from a village near. This man has been going on for years; he has drunk himself out of a fine business, and lives on his wife's property. Every moral means have been applied to rescue him; he has been taken into the country, with all the comforts of life, and all the amusements of shooting, fishing, &c., and still it goes on. Out of the depths of my misery I repeat the poor child's cry. 'Can nothing be done to stop papa?' Surely, sir, while lives are hanging in the balance—while precious souls are to be saved, is the House of Commons to stand weighing niceties of procedure, instead of passing Mr. Dalrymple's Bill, and affording to hundreds, aye, thousands, a chance of salvation?"

#### OATMEAL AND WATER AS A DRINK.

—Oatmeal (says the *Edinburgh Medical Journal*), according to *Moore's Rural New Yorker*, is rapidly growing in favour on the other side of the Atlantic. According to a contributor to our contemporary, it is made into delicious breakfast-cakes, cracknels (very palatable), cocoanut-cracknels (also pleasant to the taste), and pie-crusts, which eat sweet and crisp. But we are informed by the same authority, that in its raw state, when it is mixed with water, it is becoming a favourite dish. The brose of "Auld Scotland" is being relished—and we are glad to note this, because we believe it to be a healthy and muscle-forming commodity—by the hunters and trappers of the West, who are substituting oatmeal in this form for parched Indian corn. The same brawny fellows—whose powers of endurance are proverbial, whose scorn of fatigue is known to all readers of travel and natural history—have found out that a very acceptable drink is made by putting about two teaspoonfuls of oatmeal into a tumbler of

water. We have often established the excellence of this ourselves. "This they—the hunters and trappers—aver to be the best drink they can use, as it is at once nourishing, unstimulating, and satisfying." This drink, we are also assured, "is rapidly coming into use in large establishments where men work much in the heat. It has long been used in the large glass-factories and iron-foundries of Europe, and is coming into use in our own country. It is common to find it in the large Government works. In the Brooklyn Navy Yard it is a great favourite; two-and-a-half pounds of oatmeal being put into a pail of moderately cool water. It is said to be better than any of the drinks made up with vinegar, molasses, &c., which our farmers use in the harvest-field. A well-known medical writer says, 'that from it is obtained power to sustain the exhausting influence of perspiration.' Indeed, we have seen it tried with great satisfaction, and we commend it to the attention of our hard-working friends in the harvest-field." Shade of Dr. Johnson! what think you now of your despicable food of men in Scotland?—*British Medical Journal*.

ABSINTHISM.—Our neighbours, the French, whenever they take up with a new social vice, are pretty sure to invest it with some special features, and to pursue it with an energy that is all their own. Formerly, there can be no question that the French nation was far more free from the vice of alcoholic intemperance than the English; but at present, in Paris and the large cities, at any rate, this scandal is almost as great as in the worst of our towns. Moreover, the favourite liquor which the French choose to tipple has become more and deadlier in its composition, and, consequently, in its effects. Originally the only important ingredient in its composition, besides alcohol, was the essential oil of absinthium, or wormwood; and though, doubtless, this added something to the mischievous effects of the liquor, it would be impossible to trace to it, or to the other comparatively trivial ingredients, the more serious of the

special results which are now observed to occur in the victims of absinthe. An analysis recently made at the *Conservatoire des Arts* shows that the absinthe now contains a large proportion of antimony, a poison which cannot fail to add largely to the irritant effects necessarily produced on the alimentary canal and the liver by constant doses of a concentrated alcoholic liquid. As at present constituted, therefore, and especially when drunk in the disastrous excess now common in Paris, and taken frequently upon an empty stomach, absinthe forms a chronic poison of almost unequalled virulence, both as an irritant to the stomach and bowels, and also as a destroyer of the nervous system. It is probable, we think, that the addition of the antimony was intended to produce the doubtful benefit of rendering the absinthe less intoxicating, for it is notorious that tartar emetic is often slyly given to drunkards by their friends to quiet their fury. But it would be impossible to adulterate the liquor with sufficiently large doses without risking the production of nausea or actual sickness, and the quantity of antimony actually introduced only serves to do all the mischief possible, without any corresponding good.—*Lancet*.

PAUPER EXTRAS.—We quoted, last week, from a local paper into our supplement, which is devoted to Irish poor-law medical affairs, the report of recent proceedings of the Waterford Board of Guardians, to which we think it right to refer, inasmuch as the authority of the relieving and medical officers to order such nourishment and stimulants as they may think necessary, is seriously involved in the considerations which arise from the matter. It appears from this report that Dr. Cane, the local dispensary surgeon, had ordered creature comforts for an out-door pauper to the extent of £1 6s. per week. The board of guardians addressed to that gentleman, and to the relieving officer, a request to be informed of the grounds for so large a weekly grant. Dr. Cane replied by informing them that "the relieving

officer was the only person who could reply to the question, and as it was foreign to his (Dr. Cane's) business to meddle in such matters, he trusted the board would not refuse to remunerate him for writing the said reply." The relieving officer also stated that he regretted "he could not comply with the recommendation of the guardians to reduce the amount of relief, or remove the patient to hospital." As a rider to this statement, a further requisition from Dr. Cane was read, in which he recommended the following additions to the weekly grant of £1 6s.:—"To increase the fourteen glasses of brandy weekly to twenty; to give a quart of milk daily, and to order also a chicken, four pounds of beef for soup, and three pounds for frying on a gridiron." We further observe that at the following meeting of the guardians, a *locum tenens* having been meanwhile appointed in Dr. Cane's place, the woman was certified as fit to be removed to hospital, and was accordingly removed. It is just possible to conceive that a case might exist in which so monstrous an amount of nutriment and stimulants might be necessary to preserve life, but if so it is obvious that the patient could not be considered fit for removal to hospital. We are obliged, therefore, to regard such a grant as a most unjustifiable abuse of the authority enjoyed by the relieving and medical officers, and, in the interest of poor-law medical officers, a subject for regret and deprecation. Dr. Cane and his relieving officer, so far from vindicating a principle or a privilege, have acted so as to bring into contempt the authority given to them, and have placed in the hands of skinflint guardians a weapon which may be used against the dispensary doctor whenever he sees fit to order extras to the paupers under his care. We think the Local Government Board might advantageously express their opinion on the matter.—*Medical Press and Circular*, Feb. 5.

A NEW MEDICAL DECLARATION.—The medical practitioners of Montreal have issued the following Declaration with the view of correcting the

popular error that alcoholic liquors are beneficial:—

February, 1873.

We, the undersigned members of the medical profession in Montreal, are of opinion—

1. That a large proportion of human misery, poverty, disease, and crime is produced by the use of alcoholic liquors as a beverage.

2. That total abstinence from intoxicating liquors, whether fermented or distilled, is consistent with, and conducive to, the highest degree of physical and mental health and vigour.

3. That abstinence from intoxicating liquors would greatly promote the health, morality, and happiness of the people.

G. W. Campbell, M.D., Prof. of Principles and Practice of Surgery, and Dean of Faculty of McGill College.

E. H. Trudel, M.D., Prof. of Midwifery.

W. E. Scott, M.D., Prof. of Anatomy.

W. H. Hingston, M.D., D.C.L., attending Physician of St. Patrick's Ward, Hotel Dieu.

I. L. Leprohon, M.D., Prof. of Hygiene.

J. M. Drake, M.D., Prof. of Institutes of Medicine.

Hector Peltier, M.D., Prof. of Institutes of Medicine.

R. P. Howard, M.D., Prof. of Theory and Practice of Medicine.

A. H. David, M.D., Prof. of Theory and Practice of Medicine, and Dean of Faculty of Bishop's College.

J. P. Rottot, M.D., Prof. of Medical Jurisprudence.

Robert Craik, M.D., Prof. of Chemistry and Registrar of Faculty of McGill.

Thomas d'Odet d'Orsonnens, M.D., Prof. of Chemistry and Pharmacy.

F. W. Campbell, M.D., Prof. of Institutes of Medicine, Registrar of Faculty of Bishop's College.

J. Emery Coderre, M.D., Prof. of Materia Medica and Therapeutics.

R. T. Godfrey, M.D., Prof. of Principles and Practice of Surgery.

John Wanless, M.D., L.F.P.S., Glasgow.

E. H. Trenholme, M.D., Prof. of Midwifery.  
 Pierre Munro, M.D., Prof. of Surgery.  
 A. H. Kolfmyer, M.D., Prof. of Materia Medica and Therapeutics.  
 D. C. McCallum, M.D., Prof. of Midwifery.  
 George Ross, M.D., Prof. of Clinical Medicine.  
 R. A. Kennedy, M.D., Prof. of Anatomy.  
 James Perrigo, M.D., C.M., M.R.C.S., Demonstrator of Anatomy.  
 S. E. Tabb, M.D., C.M., Prof. of Botany and Zoology.  
 G. Grenier, M.D., Demonstrator of Anatomy.  
 Wm. Fuller, M.D., Demonstrator of Anatomy.  
 And seventy other physicians of Montreal.

**RUM-AND-MILK.**—Under the head of "Therapeutic Memoranda," a writer in the *Medical Times and Gazette*, of February 8, gives his reasons in favour of the use of rum-and-milk in phthisis. He has not, however, succeeded in proving, on rational grounds, the value of this potion as a remedy. With all that he says respecting milk, the majority of persons will agree; he has, however, added nothing to our knowledge respecting its effects in health or disease. He utterly fails to show that rum when added to milk, in any way improves its nutritional properties. He alleges (1), that "milk is the most feeding of foods." This is universally admitted, and hence all allow its value in wasting forms of disease. But the writer lays it down (2), that "alcohol in moderate quality is aliment, and promotes digestion. Now this is assuming the very point which most requires to be proved. With equal authority may it be alleged that opium is an aliment and promotes digestion. Before alcohol can undergo any change it acts adversely on the blood corpuscles and tissues with which it comes in contact. Before it can be burnt, it scorches the nerve cells, for which it has so powerful an affinity. Instead of nourishing it

impoverishes, instead of acting as an aliment it acts as a poison, its effects being produced in proportion to the quantity in which it is taken. So far from promoting digestion, it induces a blunted condition of the nerves which preside over circulation and secretion in the alimentary canal. It is true that immediately after the alcohol has been taken there is a degree of excitement produced, but this is but the first effect of the irritation which results in the blunting of nervous sensibility. The truth is, that persons who use alcohol with milk, whether as rum or as curacao, are deceived by first impressions. Alcohol agreeably affects the brain, as opium does, and hence the popularity of the medicine rum-and-milk, and hence also that which medical men and others overlook, its dangerous seductiveness. The quantity of rum has to be increased, in order to produce the pleasurable effect first experienced, and in many cases a craving for liquor has been set up by medical prescription. We have never known a case of phthisis benefited by the addition of rum to milk. We have known numbers improved by the use of milk alone. A case occurs to us whilst writing, of a gentleman who was the subject of consumption; a cavity of some size occupied the apex of the right lung, he was sent to a southern watering place to pass the winter. On his arrival he consulted a physician of the place, who recommended rum-and-milk. The patient told him that he had a considerable objection to taking rum, and inquired whether the milk alone would not answer equally. The reply was, "No." The gentleman, however, resolved that he would try the milk alone for a time, and if he found no benefit, then he would take the rum with it. His milk diet, however, answered the purpose admirably, and he showed by actual proof the uselessness of the rum as an addition. There is too much reason to believe that the rum in many cases not only does not benefit, but proves injurious physically and morally in proportion to the quantity taken.—*Temperance Record*.

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MEDICAL TEMPERANCE JOURNAL.

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Original Contributions.

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HABITUAL DRUNKENNESS.

It will be the amazement of a future age, as it is the reproach of this, that with all the widespread and universally acknowledged evils of intemperance, so little should have been attempted in the way of treatment for cases of habitual and inveterate drunkenness. Whether inebriety be regarded as a vice or as a disease, there can be no doubt as to the fact, that in its various shapes it is productive of more calamity than all the other maladies that "flesh is heir to." It would require, as Salvatori says, an Iliad to recount all the vices, diseases, and miseries arising directly and indirectly from the habits of drinking. Sufficient evidence of this is supplied in the report of the Parliamentary Committee, noticed in the *Medical Temperance Journal* for October of last year. The Judicial Statistics, year by year, bear collateral testimony, not only in the number of offences under the head of "Drunkenness, and drunk and disorderly," but in the number of recom-mittals for offences, most of them clearly traceable to intemperate habits. It is a scandal to an age boasting of its practical ability, and its diligence in exploring the sources of our social ills, that such cases should appear before the police-courts as that which is reported in the *Evening Standard* of June 3rd, under the head of "Utterly Lost." A woman is brought up for the thirty-fourth time, on a charge of being drunk and disorderly, and annoying the police. We give the reporter's account in another part of the journal. It is a mockery of justice to treat such a woman as a responsible agent; and the grossest delusion to expect that a three months' imprisonment will do anything to reclaim her. For such as her, if let loose upon society, nothing seems left but a return to the evil habits which have brought them to that state of utter degradation.

The number of persons summarily proceeded against presents a still more startling amount, viz., 122,310 cases of "drunk and disorderly," to say nothing of the other offences, breaches of the peace, assaults, &c., which are known to be mainly attributable to drunkenness and to drinking in one year, 1869 being taken, as it presents average results. It is all but superfluous to say that the figures, in either case, represent only a small number of the inebriates existing in society, as nothing but drunkenness, accompanied by violence or incapability, comes under the jurisdiction of the police authorities. The number of drunk and disorderly are made up mainly of those who rush to drink whenever it is procurable, and who will sacrifice every comfort to obtain it, and are hurrying onward to people the hospitals, otherwise to a premature grave. It is impossible to estimate the numbers who are graduating in the same vicious school. This very common evil, on account of its very commonness, attracts little attention, as familiarity with the worst kinds of suffering reconciles men to its existence, and they learn to regard ever-present evils as inevitable and intractable.

Drinking, as a cause of disease and crime, and in its relation to insanity, has, within the present century, been made the subject of scientific inquiry, but science, especially in relation to manners and morals, advances by slow and almost imperceptible steps, and the man who seeks to make its discoveries available in the cause of humanity, often lifts his voice in vain, and has to retire from an ineffectual struggle in weariness of heart. The report presented to the House of Commons cannot be expected, in the present state of knowledge, to result in any immediate and adequate legislation; but it will have a most beneficial effect in leading the minds of thoughtful men to a proper consideration of a very difficult subject. No one can rise from a careful perusal of the evidence upon which the report is founded without being forced to the inquiry:—From what source does all this habitual drunkenness spring? This will lead logically to further questions, whether the treatment of the inebriate, important as that may be in itself, does not fall far short of what ought to be aimed at, and whether a sound philosophy does not direct us to means of prevention rather than those of palliation. If asylums were as plentiful as fever hospitals, they could not embrace one tithe of the victims of a debased habit. Compulsory restraint will be rarely practicable, and in very few but such cases as obtrude themselves upon the public notice, as in the majority of instances there exist powerful motives against voluntary seclusion. The cases of open drunkenness are comparatively few to those which shun the light of day, and the most lamentable and the most numerous are those where the inebriate, conscious of his

degradation, has sufficient control to screen his excesses, or where his friends do this for him. It is, of all the afflictions which can fall upon a household, the one that most fills the hearts of relatives with shame and grief; and no effort is spared to throw over it a veil of concealment—hence the difficulty of dealing with, or even reaching, the drunkard or the dipsomaniac.

In entering upon the subject, a simple question meets us upon the very threshold. What is drunkenness? There have been in medical works many attempts to define it, and much speculation as to its cause and cure; but the question is at present unanswered, and will remain so until the faculty are prepared to go to the very root of the matter, and trace the action of the intoxicating agent upon the physical and mental constitution of man. There have been laborious attempts to describe the different stages, and the sensations at each stage, of the progress to inebriety. Macnish, in the "*Anatomy of Drunkenness*," has given a somewhat elaborate description, and this has formed the text from which many other writers have quoted or expounded. It is a description written in the closet, and from a very limited experience. He begins by describing the pleasurable sensations of getting drunk, and carries the drinker on to the last stage of insensibility. This can apply to only the smaller number of cases. The sensations in the first stages of intoxication are not always pleasurable; in the confirmed drunkard they are seldom so, and instances are not uncommon where, after a debauch, the drink creates a loathing which is overcome only by the anticipation of the dreaminess or stupefaction that drowns memory and thought. There has, as yet, been no satisfactory explanation as to the phenomena of drunkenness. The results are so extraordinary, and so dissimilar, as to puzzle the beholder who has never experienced intoxication. A common notion is that drunkenness changes the character; but the more general and no doubt the more correct opinion is that it lets loose those weaknesses and passions, which men in their sober hours have strength to overcome or prudence enough to conceal. An old satirical writer said of a man of whom he expressed distrust, that he dared not drink like his fellows, fearing that in his cups his true character would stand revealed. It is a matter of common observation that the ruling passions, propensities, and failings of the drinker are brought out under the excitement of drink. The conscience, which is the guide of human action, is impaired, weakened, or overpowered; and thus we find men who are sedate and decorous in their ordinary habits, boisterous in language and licentious in conduct when under the influence of drink. The naturally reserved man will become morose, the generous man will be profuse in his offers or his gifts—the irrita-

ble man more passionate—the vain man more conceited, and the sentimental man more maudlin. It seldom or never improves the disposition. Some of the eccentricities of drunkenness are recorded by the medical witnesses in the evidence referred to; and although a man, when sober, may recollect the follies and extravagancies of which he has been guilty when in a state of drink, and be thoroughly ashamed of them—he perpetrates the same follies at the next indulgence. The manifestations are not dependent upon the quantity or even the quality of the drink—they sometimes follow a small quantity, and are produced alike by beer, wine, or spirits. When a man begins to drink it is impossible to predicate where it will end. Having recourse to it occasionally, a number of circumstances may bring him to seek constant excitement in drink. This is a matter of daily experience, and will assist us to a conclusion as to what drunkenness really is. It is nothing more than cerebral excitement, an inflammatory action produced by physical disturbance of the brain, and if this excitement be continued, or is often repeated, a permanent derangement arises, which is ultimately succeeded by positive disease. Dr. F. Winslow says that, “in habitual drunkards, the whole nervous system, and the brain especially, becomes poisoned by alcohol.”

There is no difference of opinion among the medical men examined, as to the fact that the mind of the habitual drunkard has become diseased, and in almost all cases to such an extent as to render him powerless under a dominant appetite. Dr. Doyle says “as a general rule inebriates as a class are afflicted with what is now recognised as a positive disease, which they, unaided, are powerless to remove.” And, again, “I am of opinion that there is a great similarity between inebriety and insanity.” It is well known that continuous, and even occasional inebriety, leads in numerous cases to insanity, and Dr. Parrish has drawn a distinction that it is most important to examine. He says, “Men who are intemperate, either from opium or brandy, are not, in the majority of cases, men of insane intellect. Medical observation and diagnosis have, we think, distinctly proved that the diseased portion of the mind in such cases is, chiefly, of the will, not the intellect; they know, but are impotent to perform.” We would ask from what does that impotence arise? and an answer to that question will show the value of the distinction drawn by Dr. Parrish. Illustrations may be taken from the ordinary cases of insanity; for example, there are persons who labour under uncontrollable impulses, and confess an irresistible desire to commit some deed of violence. We have instances where a mother has fled in terror from the cradle of her child, as she felt in its presence an overpowering inclination to murder it,

and the homicidal, or the suicidal monomania, are amongst the most perplexing, but are not the most unusual forms of insanity. In all such and in all similar cases, the intellect may be said to be at war with the will. There is a knowledge of what is right with a disposition to do wrong; and the difference between sanity and insanity of this kind appears to be this: that in one case the mind is enabled to control the inclinations, and in the other it is not. The balance is altogether disturbed. Looking broadly at the question, we shall perceive that philosophy has been in the wrong not to seek for the causes of moral and mental derangement in some violation of the physical laws. Maudsley says: "Multitudes of human beings come into the world, weighted with a destiny against which they have neither the will nor the power to contend; they are step-children of nature, and groan under the worst of tyrannies—the tyranny of a bad organisation." It is certain that many are sent to prison who ought to be sent to the lunatic asylum, or to a reformatory, and thousands are treated as criminals who ought to be treated as patients.

It would seem that Dr. Parrish has made one of those distinctions which, without explanation or qualification, tend to perplex and obscure scientific investigation. He has attempted a distinction between the action of the intellect and the will, when it will be seen that both are dependent upon the action of the brain. What do we understand of either conscience or will, as distinct from the intellect? Much confusion has arisen in the discussion of these subjects from the absence of clear definitions, and from another cause. Devout men, afraid of the doctrines of a gross and grovelling materialism, have startled at the teachings of science. In their reverence for the written revelation, and their apprehension that its sublime teachings might be weakened, and its momentous truths explained away, they have rejected or neglected the voice of the elder revelation—that which is written upon the book of nature by the hand of God, and which is as intelligible to the cultivated understanding as the commandments engraved upon the tables of stone, and delivered to the prophet upon Sinai. The connection of mind and body is one of those solemn mysteries which it is not permitted us to understand; and we are no nearer the solution than were the great thinkers of antiquity, Aristotle and Plato, who indulged such ardent longings to explore it. It is, however, most satisfactory to know that nothing is hidden from us that is necessary for our safe conduct while on earth. It has pleased the divine Creator of the universe to make the mind and body of man dependent, in this life, upon each other; and to such an extent that no injury can be done to one, that does not affect the other. The commonest accidents of every-day life show this con-

nection. A fit of indigestion, or an aching tooth, will impair or disturb the action of the mind; and a bereavement, or heavy loss, affecting the mind, will destroy the appetite and prostrate the body. The sting of a gnat will often create mental uneasiness, from the physical pain it occasions, greater than would follow a heavy commercial reverse. By a thousand minute circumstances man is hourly reminded that he is "fearfully and wonderfully made"; and they admonish him that a healthy mind depends upon a healthy body, and that he must not expect the health that is the greatest of human blessings, without strict regard to sobriety and to chastity. The brain has to be kept in health by the same blood that nourishes the lungs, the heart, or any other of the vital functions, and is more sensitive than any other organ of the body. It resents any transgression by dreams, heaviness, and headaches, and continuous functional derangement is followed by organic disease as surely as such ensues in the liver or the stomach. When we speak, therefore, of the conscience, or the will, or the intellect, we speak of the action of a material organ—thought being the function of the brain, as digestion is the function of the stomach. The brain is the source of volition, of all voluntary and involuntary action, of all sensation, and the terms once familiar to the student in metaphysics—intellect, will, conscience—taken separately, have no scientific meaning. They are functions of the brain; and intellect, will, conscience, are only convertible terms, used indifferently to describe certain complex and combined mental processes. The affections arise in the brain. Under the excitation of external circumstances, the eyes fill with tears, the cheeks become crimson, the heart palpitates, and the frame trembles, but all visible emotions are preceded by, and are the result of previous cerebral action.

When the ground thus hastily sketched is gone carefully over, we then learn what is meant by impotence of the will. We are able to understand how it is that men of acute discernment and great talent, with generous and virtuous impulses, become slaves to drink, and, while despising themselves, are powerless under temptation. The brain, in such cases, has become affected, and, as the appetite has grown by indulgence, the power of controlling it has become more and more feeble. Alcohol acts more rapidly and more powerfully upon the brain than upon any other organ, and thus the mind which governs the passions, the faculties, and the propensities, or in other words the brain, becomes enfeebled, and is less and less able to properly guide the conduct or to sway the appetite. There is still a vague error prevailing that it is degrading to the mind to regard it as a sentinel over the appetites and propensities. There are men who aspire to be wiser than what is written, but the true wisdom is to trace the absolute

and inseparable connection for all the purposes of this life, which has been established between the mind and the body. What are we to understand by appetite? In a worthy book, lately published, and which discusses with considerable knowledge and ability the subject of occasional and continuous inebriety, the author commences by stating that the love of intoxicants — because stimulating drinks are sought for and used by men in all climes, and under all aspects of savage and civilised life—is a natural, and not an acquired appetite. This is a looseness of phraseology of which there is much reason to complain. Were the appetite for intoxicants a natural one, it is nothing to the purpose; as the mind of man is given for the purpose of directing and controlling the desires and the appetites. He is made up of intellectual and moral faculties, and animal propensities, and none of these are evil in themselves; they are all given for a beneficent purpose, and in their proper development and exercises serve that purpose. In a Christian life the animal is kept subordinate to the moral, and the moral receives its direction from the intellectual. In a strict sense, in relation to aliment, the natural appetites are hunger and thirst, and these only. These powerful appetites are given for the maintenance of the individual, as the desires for sex are given for the perpetuation of the species. The whole animal and vegetable kingdoms are given over to the use of man, out of which he selects what he requires for shelter, for raiment, and for food. There is no instinct, as in the case of the ox, that enables him to select only a particular kind of food, or to detect the proper herb from the poisonous weed. In his case, faculties of perception are given, which enable him to discriminate the wholesome from the noxious. What instinct supplies to the brute, he has to learn by observation and experience. In the early and barbarous ages, the eating of human flesh would be considered the gratification of a natural appetite, or roots and fruits would supply the only available food. There are nations of men now who regard as luxuries those things at which the stomachs of Europeans would revolt. A desire for stimulation no doubt exists, but it is the province of the mind to control such desires as, in their gratification, tend to destroy the health.

While there is, undoubtedly, in all races of men a desire for excitement, there is no natural appetite for alcohol, as the taste of a healthy child will recoil and the stomach rebel against it. The appetite for alcohol is in every sense an acquired appetite. How can the term natural appetite apply to any kind of food, when the immense variety, and the changes which cultivation and the advances of civilisation effect, are taken into account. It can, however, with strict propriety be said that the natural thirst is best satisfied by water from the spring or from the brook. It may

appear idle to enter upon a criticism of this kind—but it is really not so in view of the very shallow reasoning and loose definitions made use of, and the illogical conclusions at which men arrive in order to justify the use of intoxicants. The question after all is this—Is alcohol food or poison?

This rapid and imperfect glance at the philosophy of the subject will enable us to understand better the case of the habitual drunkard. In the drinker there is an antagonism always at work. The free use of alcohol is undermining the strength of the physical structure, and, as a necessary and inevitable consequence, affecting the health of the brain upon which the moral conduct depends. The appetite, as has already been said, is acquiring strength and potency, in proportion as the body becomes enfeebled, and the power of restraint partakes of the body's weakness. The action may go on for years, and the victim all the time nourish the belief that he can at all times keep within proper limits—that the will, which daily indulgence is undermining and weakening, will always be powerful enough to keep him from excess. This is the history of every case, except those where drunkenness is the result of hereditary taint. There are several melancholy instances related in the text-books on the subject, and several given in the evidence so often referred to. A recent, and unreported, case is a mournful example of what drinking can effect. Lately, after the birth of her first child, an accomplished woman of 23 took to drinking. Brandy had been given to her very freely during the prostration following a severe confinement—and had been administered by a nurse, herself fond of the bottle, long after the medical adviser had ceased his attendance. The appetite became uncontrollable. The artifices used to obtain drink and to conceal her excesses were extraordinary, and yet before and for two years after marriage her propriety and truthfulness were most exemplary. After three years of a miserable existence—drinking, and repenting, and suffering—she died in a paroxysm brought on by drinking. It turned out that her father and grandfather had been great drinkers, and were the descendants of great drinkers; not bearing, however, the character of drunkards, but the father being able to boast that he could out-drink all his guests and go to bed sober, by which it could only be meant that he did so without assistance. The mother, too, had for many years, and before the birth of this daughter, indulged to excess, and for weeks kept her own room either drinking or recovering from its effects. The father cared little for home—his days were spent in the sports of the field, and his evenings with his boon companions, so that his poor wife was left to herself. The daughter had escaped the

influence of such example, as she had been brought up at the home of an aunt on her mother's side. The taint, however, was in the blood, and the medical prescription of brandy had aroused a slumbering appetite. It is supposed that she was never really sober after the nurse left, and that in her more sober intervals the recollection of her excesses, and of the misery she caused her husband, hurried her into fresh excesses. The widower never had a doubt, when he became acquainted through the aunt spoken of, with her family history, that the sins of her parents were visited upon the child. She had always exhibited an extreme nervous excitability, but no strong inclination for drink, but rather otherwise, until after her confinement.

Such cases are eminently instructive, and they dispose of every plea that can be urged for the indiscriminate use of alcohol, whether as food or medicine. If it is ever considered necessary, it should not be prescribed, even in extreme cases, without a full knowledge of the habits of the patient, and a most strict and careful examination of the constitutional tendencies. To prescribe alcohol in such a case as that cited, is equal to the act of laying implements of destruction within the reach of the monomaniac who has attempted his own life or that of others. There is much more than this to be learnt from the contemplation of such a history, as, when looked at fairly, it answers every fallacy urged in defence of alcoholic drinks as beverages. This victim of an evil propensity was a lady of education and accomplishments, and of some position in society; she had been tenderly and carefully trained by a relative who had rescued her from a home where the habits of both parents were so unsuited for the culture of a young girl. She had married well and was attached to her husband, and the fatal habit of drinking began at the time when, in addition to all other motives to good conduct, the maternal instincts and affections were called into active exercise. She was under the weight of that destiny of which Maudsley speaks. It was a clear case of cerebral disease. It enables us to understand better what is meant by impotence of will. There was no real oblivion of mind as to the dangers or pernicious consequences of indulgence. She was fully aware that she was committing a great wrong to her husband and to her new-born child, and the knowledge brought a bitterness akin to frenzy or despondency, from which she sought an escape in renewed excesses. It would be a mistake, however, to suppose that what is called the intellect was unaffected. The agent that had produced an impotence of will, had weakened the intellect. The whole functions of the brain were more or less deranged, and her discrimination of right and wrong would be warped and clouded. In the presence of drink she was no more a free agent

than any of the persons spoken of, who are hurried by uncontrollable impulses to incendiarism, to infanticide, or to suicide, many of whom are conscious that in their desperate attempts they are violating some of the most sacred of the Divine laws. The brain—the organ of thought, the source of all action—is in such cases labouring under disease.

The habitual drunkard is suffering, as Dr. Winslow would express it, under a poisoning of the brain. Whether the appetite is partially the result of ancestral transgressions, or wholly the result of free indulgence in the drunkard himself, can make no difference as to the necessity for proper treatment. That necessity is now acknowledged. The methods of treatment are not determined, nor can we hope for much at present beyond mere experiments, but they will lead ultimately to beneficial results.

The various methods of treatment proposed, as well as those already adopted, must be discussed at another time; but the subject cannot be dismissed now, without a remonstrance against the view that there can be any permanent cure for drunkenness but that of entire and perpetual abstinence from strong drinks. The experience of Temperance Societies proves that the drunkard can only be reclaimed, and his reclamation made permanent, by total and continued abstinence. No matter how long the interval of sobriety, there is imminent risk of relapse if the drink is resorted to. There are deplorable instances where reclaimed drunkards, after years of abstinence, have fallen again into their former habits. It is, therefore, a grave delusion to expect that medical care however skilful, or seclusion however protracted, can give security against relapse—if drink be again taken. The latent fire is there, and an indulgence, however slight, may blow it into a flame.

There is danger of overlooking the most important point of all, and, while making provision for the habitual drunkards, the general habits which are training up others in the same career may be left to go on overlooked and unchecked. It is merciful to rescue the drunkard, but much more is demanded of society—the prevention of drunkenness. Drunkenness arises from well-known causes, and all speculation is misleading that does not carry us to the first cause. Whether a man has an inherited or acquired weakness, inducing a desire for stimulants, he cannot become a drunkard if he abstains from the drink. It is most unphilosophical to talk of any remedy for general intemperance, but abstinence from that which makes men drunk. The habitual drunkard is, after all, a manufactured article, made and fashioned by the example of his fellows, and trained up to his unworthy career by the usages of the society in which he is born. The disease and its cause are well-known. The belief in alcohol as

food and as medicine, as sustenance, and as a restorative, is the cause of drunkenness. Science and experience are the great teachers, and they take us back to study the constitution of man. That study informs us that alcohol is not food; that it serves no useful purpose; that it neither builds up nor nourishes any part of the bodily structure; but that its action upon the brain is disturbing and deleterious—that brain upon the health of which the healthy action of mind and body depends.

The inquiry is then forced upon us, whether the drink which produces a number of habitual drunkards—whether in fact an agent that is capable, in undefined and unascertainable quantities, of producing that state of bodily and mental disorder called drunkenness, ought to be recognised as a beverage. That inquiry will conduct us to a proper treatment of habitual drunkenness, and it will do much more than this—it will teach us a great principle of prevention. Drunkenness is no more a necessity of our civilisation than fever is a necessary condition of our social existence. The disuse of alcohol as a beverage would banish drunkenness just as certainly as the removal of filth and uncleanness of all kinds banishes fever. When the action of the spirit alcohol upon the brain is examined the divine intention is expressed just as clearly as the moral law is proclaimed in the sacred text.



## DRS. THUDICUM AND DUPRE ON WINE.

ONE important step towards settling the question of the use of alcoholic liquors for dietetic or medicinal purposes would be to make known the manufacture and composition of these liquors. At the present time very few persons have clear ideas of the various processes by which wine and other inebriating drinks are prepared, or of the substances contained in these drinks. This want of knowledge is not confined to any one class of the community, for we have found it in persons of superior position and education, and we are sorry to say that we have known even medical men drink, and prescribe for others, liquors, of the composition and properties of which they knew very little. We hold, therefore, that anyone who makes the public acquainted with the phenomena of fermentation, and with the composition and physiological action of alcoholic liquors, is a public benefactor, and, whether he knows it or no, he is promoting the cause of temperance. In our Journal for January we gave a short notice of Dr. Druitt's Report on Cheap Wine. That report was calculated to uphold the popular errors respecting wine, and its author was

evidently a firm believer in its value. He appears to have tried various wines *empirically*, but not to have subjected them to chemical and physiological investigation. His report was, in fact, such a one as a clever wine merchant or a publican might write, and was more likely to spread error than to promote correct views respecting wine. We now call the attention of our readers to a work of a different character, and of much higher value. It is "A Treatise on the Origin, Nature, and Varieties of Wine, being a Complete Manual of Viticulture and Œnology," by J. L. W. Thudicum, M.D., and August Dupré, Ph.D., Lecturer on Chemistry at the Westminster Hospital. It is a handsome volume of 760 pages, splendidly printed, with numerous illustrations. It is an elaborate work, which must have cost its authors a great deal of time, study, and labour, and will be regarded as an authority on most of the subjects on which it treats. The authors, in their preface, say, "All persons who are fond of wine as an article of diet and a means of enjoyment, will be able to find in this treatise information about the origin and varieties of wine, which will enable them to regulate their wants with due reference to their liking and their means." The authors do not enter into a discussion of the physiological effects of wine, but appear to assume that wine is useful and innocent. Of course the authors are not teetotallers; but their work contains revelations as to the production and composition of wine, which ought to open the eyes of wine drinkers, and ought also to make total abstainers thankful that they are emancipated from the delusions, expense, and danger connected with the use of wine. There are some facts stated by Drs. Thudicum and Dupré as to the manufacture of wine, which are of a disgusting character. Thus, in speaking of the vintage in the Médoc, at page 323, they say:—

"The grapes are thrown with shovels on large square wire nets, and then moved about with the hands until all the berries have fallen through the meshes into the press below. The stalks are then kept apart for a while. When a press is sufficiently filled, a number of men step in, and tread the berries with their naked feet. This they do to the sound of music, of the clarionette or violin. They dance regular *contredanses* until the pulp has been trodden through. The pulp is then shovelled upon a heap in the middle of the press, the pressmen dance round it, and at each step throw, with uplifted leg, a little bit of the pulp from the heap, upon the ring in which they dance. When the heap is quite dispersed the *contredanses* begin again, and so on until the pulp is perfect."

This way of pressing the grapes is practised at other places. At page 436 there is an account of the way in which it is done in Burgundy:—

"At the appointed time a cart, drawn by a horse, arrives. In the cart is a large oval vat, looking like a large bathing tub. The carter now takes off his boots, turns his trousers up above his knees, and stands in the vat or ballonge.

The porters now hand basket after basket to the carter, who empties them into the vat, and then treads the grapes down as fast and as firmly as he can. When the vat is full, the carter dismounts, rubs his feet upon the nearest bundle of grass, puts on his boots, and drives the cart home. He then returns to fetch a similar load, and again takes off his boots, to tread down the grapes with his unwashed feet as before."

There are still more disgusting practices connected with wine-making than treading the grapes with naked feet. At page 439 there is an account of a phase in the production of Burgundy, in which naked men get into the fermenting grape juice, and mix it thoroughly for about half an hour, and then they emerge from the liquid, covered with a dark red dye, and after wiping their bodies with the shirts they pulled off, they put on fresh shirts and redress. These filthy practices are not necessary, and in many places wine is made without having recourse to them. But ordinary wine drinkers have no means of ascertaining how the wine they drink was manufactured. It is some comfort for them to know, however, that wine made in this dirty way may not be worse than other wines. There is a process in wine-making called "plastering." It appears to be a common practice in Spain, Portugal, and the south of France, to add plaster of Paris to the grape juice, under the idea that it increases the quantity of sugar. Drs. Thudicum and Dupré tried a series of experiments which proved that the addition of plaster to the grape juice or must was not only unnecessary, but that a positive loss was occasioned by the use of plaster, and the wine was rendered unwholesome. They say:—

"The addition of plaster of Paris, therefore, tends to the more or less complete removal of the tartaric acid, one of the most characteristic constituents of grape juice, leaving only free or combined malic acid, an acid which grapes have in common with all other sour fruit. The place of cream of tartar is taken by sulphate of potassium, a salt having a perceptibly bitter taste, and acting as a purgative even in moderate doses."—p. 121.

We should like to know how many of the consumers of wine in this country are able to tell whether their wine has been "plastered," and it would be still more interesting to know how many drink "plastered" wine in consequence of its medical prescription. Patients are ordered to take "good wine," "sound wine," "unbrandied wine," and so on; but as there is no royal road to geometry, so there is no ready way for either doctor or patient to distinguish good wine from the "plastered" or other strangely prepared coloured liquids sold under the name of wine.

We have seen some statements in the newspapers as to failure of the vine crop. But wine drinkers and wine makers need be under no apprehension about the vines. In this book there is an

account of the production of wine by the process of Petiot. He found that by adding solution of sugar to the pulp of the grapes, out of which wine had been made, he obtained a very good wine, and he repeated the operation several times, and even after the fifth experiment with the grape pulp left from the previous fermentations, he obtained a quantity of wine which Petiot says was "wine in the full sense of the word." Drs. Thudicum and Dupré say:—

"It was, therefore, certain that the many matters which are contained in the grapes, or some of them, and which are not extracted with the must, are capable of passing into a large quantity of sugar solution, when it is brought into contact with the grapes or their residues, and of transforming it into wine. These experiments were witnessed by the celebrated chemists, Thénard, father and son, who were neighbours of Petiot. Thénard was, in the year 1855, prevailed upon to treat the whole of his vintage produce according to this method, and he obtained from a quantity of grapes, which, according to the ordinary proceeding, would have given him 500 hectolitres of wine, 2000 hectolitres, the quality of which gave general satisfaction."—p. 112.

This method has been introduced into Germany by Thilmany, General Secretary of the Agricultural Society of Rhenish Prussia. Drs. Thudicum and Dupré give full particulars of this method, and describe the special apparatus and rules for the production of sugar-solution wines. These wines can have the quantity of alcohol nicely regulated by the quantity of sugar employed, and we have no doubt they may give general satisfaction, inasmuch as they contain a sufficient quantity of alcohol, the all-important ingredient. The use of sugar in wine making, is, however, no novelty, but it has never, perhaps, been used on so large a scale, or so systematically, as by this method of Petiot. But can these wines be called natural wines? Or we might ask, are any of the wines of commerce natural? What is generally understood by the term natural wine is wine to which no spirit has been added. But there is not much wine to be met with which contains no more alcohol than was produced by its fermentation. According to Drs. Thudicum and Dupré, when 16 per cent. of alcohol is present in a liquor which is fermenting, no further production of alcohol can take place; it is, therefore, evident that all wines containing more than 16 per cent. of alcohol must have had spirit added to them. In the interesting work, "*Gatherings from Wine Lands*," published by Foster, it is stated that of forty samples of pure Spanish and Portuguese wines obtained in the country, the average proportion of spirit was 9 per cent., and in samples of pure *dry* white wines of the counties, the average proportion of spirit was 14.14 per cent. It is also stated that the most spirituous wines of Champagne in their *natural* state, carry from 8 to 9 per cent. of alcohol when new, and about 11 per cent. when old, and it is the same with the most spirituous wines

of Burgundy. We may safely conclude that all wines containing more than 16 per cent. of alcohol have had spirit added to them.

We must not suppose, however, because a sample of wine contains less than 16 per cent. of alcohol that it has had no spirit added to it, for light wines are frequently brandied; and in Foster's book, at page 51, it is stated that, "One failing to which some of the growers are addicted, and from which all the most famous of Rhenish producers are not free, is that of fortifying their wines with brandy!" We may conclude, therefore, that there are not many wines entitled to be called "natural," even in the limited sense in which this term is understood. But if we take the term "natural" to mean a wine obtained by the simple fermentation of the juice of the grape, to which nothing has been added and from which nothing has been abstracted, such wine has no existence. All the wines of commerce are the products of human skill and labour. They differ essentially from the grapes out of which they have been manufactured. The grapes contained nutritious substances, of which hardly any is to be found in wine; and wine contains poison, none of which existed in the grapes. To call alcoholic wines "natural" is almost as absurd as to speak of natural chloroform, or natural hydrate of chloral. But whether wine be a natural or an artificial production, an enormous quantity of it is consumed, and it is of great consequence that its chemical composition and physiological action should be rightly understood.

One important question is, In what state does alcohol exist in wine? is it in combination, or only mixed with the other constituents? It is long since Fabroni asserted that alcohol did not exist in wine, although it could be separated by distillation. That notion was proved to be erroneous by the late Professor Brande, who separated the alcohol from wine without the application of heat—and now no one doubts the presence of alcohol in wine. There is some difference of opinion, however, as to the state of the alcohol. It has been assumed that the alcohol produced by the fermentation of the wine is in combination with some of the other constituents, but that when spirit is added to wine it does not combine with any of the other ingredients, but is merely mixed with them. This idea leads to the opinion that the so-called natural wines are not so injurious as those which have been fortified with brandy. Drs. Thudicum and Dupré have thoroughly investigated this subject, and after a series of special experiments they say:—

"We have taken some trouble to investigate this point, and may at once state that we have not found a single physical or chemical property possessed

by wine which is not in perfect harmony with the assumption that it contains alcohol as a simple admixture, and not in any sort of combination."—P. 159.

The results of these experimental researches respecting the state in which alcohol exists in wine, perfectly agree with our ideas regarding it. We view wine as an alcoholic mixture—its strength and its power, for good or evil, depending almost entirely upon the amount of alcohol. No one will imagine the colour to be of any importance, although it may please the eye. And though we must admit that there is something very pleasant in the aroma of some wines, and that the flavouring matters may tickle the palate, there has never been an atom of evidence to prove that these are of the slightest benefit, while there are reasons for believing that the subtile ethers, which give the odour and flavour to wine, may act injuriously. The same remarks will apply to the acids, the sugar, the tannin, and the salts of wine—there is no proof that these are capable of increasing the good effects of the alcohol, if it produce any, or of neutralising the power we know it possesses of doing mischief, while there are many cases in which noxious effects are caused by these ingredients. There is yet much to learn of the action of fermented liquors. But before we can get sound views of their action we must get definite ideas of their composition. Wine, beer, and spirits are vague terms. Under these names a great number of liquors are sold, differing greatly in composition. At present there is no rough-and-ready way of ascertaining the composition of a sample of wine. Hence the prescription of wine for medical purposes is one of the most unscientific prescriptions ever given. It is the same as to say, take a coloured mixture containing some alcohol, acid, water, and other ingredients of which we know nothing. To the strong and healthy such a prescription may be dangerous, to the sick and weak it may prove destructive.

It is possible, however, by chemical analysis, to learn the nature and amount of all the constituents of wine. Drs. Thudicum and Dupré have devoted 156 pages of their book to the chemistry of wine. They describe the analytical processes for ascertaining the amount of alcohol in wine—the acids, the ethers, the varieties of sugar, and the fatty, colouring, albuminous, extractive, and mineral constituents of wine. They also describe the instruments and chemical reagents necessary for the performance of an analysis of wine. A complete analysis of wine, according to their syllabus, occupies several days. If any of our readers possess the required apparatus and reagents, and skill in manipulation, they may, by following the instructions of Drs. Thudicum and Dupré, ascertain for themselves the quality and quantity of most of the con-

stituents of wine. But such an elaborate analysis as this does not exhaust the subject, for there are other alcohols in wine besides what is generally understood as alcohol. The several alcohols known to chemists are all poisons; the liquid commonly called alcohol is the *ethylic*.

Drs. Thudicum and Dupré say:—

“Of the remaining alcohols we have in wine besides the ethylic, which greatly predominates, propylic, butylic, amylic, and caproic. The relations of these alcohols to the qualities of the wines are not yet sufficiently investigated. All the alcohols of this class in wine, and in all other fermented liquids, are primary ones, and generally, though not always, also normal. Of the several aldehydes, the ethylic, and the propylic are now and then found in wines. Of the acids, we find formic related to methylic alcohol, as acetic acid, a normal ingredient of wine, is to ethylic alcohol. Of propylic alcohol we may have not only the aldehyde, but also the acid, propionic acid. And of each of the higher members of the alcohol series we may have not only one but several primary forms, and of these forms the respective aldehydes and corresponding acids. Lastly, we may have compound ethers of all these alcohols and acids formed with the acids corresponding to their series, as well as compound ethers of all these alcohols with the other acids of the wine. The foregoing will suffice to show that, even in regard to the alcohols alone, the possible varieties of wine must be almost infinite, and will also give some indication as to the difficulties to be encountered in fixing the character of a wine by chemical analysis alone.”—P. 131.

Of course we must not rest satisfied with chemical analysis, but must add to it physiological investigation before we can hope to arrive at just conclusions. Still, we regard the work we are now noticing as a valuable aid towards an answer to the question, “What is wine?” It contains the results of the analysis of a great variety of wines, in a series of elaborate tables occupying twenty-three pages. One fact which these analyses show is, that wines called by the same name vary greatly in their constituents, and we think we may justly conclude that the production and the composition of wine is understood but by very few wine drinkers. It appears that 133 wines were analysed, and the tables furnish a minute account of the composition of the wines of the principal wine-producing countries. The greater part of these wines were lighter than water; some, however, were heavier; and all were heavier than water when the alcohol was removed. There was a considerable variety in the amount of acid they contained. Some of the wines were free from sugar, others contained a considerable quantity; one sample of sparkling Burgundy contained 8.600 per cent. of sugar. They also differed greatly in strength. In German wines the alcohol was from 7.35 to 11.58 per cent., in French wines 8.41 to 17.05 per cent., in Spanish wines 12.11 to 18.77 per cent., in the Portuguese wines from 9.78 to 18.06 per cent., in Greek wines 7.91 to 13.41 per cent., and in Cape wines from 15.72 to 22.31 per cent. It is plain

enough, therefore, that there is a great difference in the amount of the several constituents of wine, the action of which is best understood, such as the acids, the sugar, and alcohol. The ethers and the other alcohols besides the ethylic are in small quantity, and they do not, as far as is known at present, play a very important part in the action of wine. The acids in wine are sometimes accused of causing uneasiness and indigestion, and this is especially likely to be the case if the wine contained much sugar. The sugar, too, is charged with producing and aggravating gout, and we think it would be difficult to show that this charge is unfounded. There can be no doubt that to many persons even the most moderate use of wine is positively injurious, and of course the excessive use is injurious to all who are guilty of it. But the all-important ingredient in wine is the alcohol; all the other things in it have comparatively little influence for good or evil. It is necessary, therefore, that we should know the kind and quantity of alcohol in the wine we drink ourselves or recommend to others. It is not a matter of much consequence whether the alcohol was produced in making the wine, or was added to it subsequently, provided it consisted entirely of *ethylic* alcohol. But the spirit added to wine is frequently contaminated with amylic alcohol, which is a potent poison. Half an ounce killed a rabbit in a quarter of an hour, and a dog in six hours. When taken it is absorbed, and may be detected in the breath. It causes symptoms of drunkenness, increased frequency of the heart's action, loss of motion, hurried breathing, and slow death. Of course amylic alcohol is not generally present in wine in sufficient quantity to cause all these effects, but as it is present in bad brandy, and as such brandy is often used to fortify wine, there may be enough of it to add to the noxious quality of the wine. Now supposing the wine is what is termed "natural" wine, and to have had no adventitious additions, what is it? In our view it is simply an alcoholic mixture, and no amount of sophistry can show that it is anything more. It can act like other liquors containing alcohol. It can make persons who use it believe in its virtues, and feel an apparent necessity for it.

Wine has long held a high position as essential in the treatment of disease. An opinion, however, is gaining ground that wine is seldom useful and often injurious, and that whilst it hardly ever removes debility, its use tends to render debility permanent. The alcoholic treatment of disease has come down to us from our forefathers, and we have adopted it without taking the trouble to investigate. But a spirit of enquiry is roused, and the use and abuse of alcohol will soon be better understood, and the practice of recommending liquors the composition and

action of which are not known, will we hope be given up. The late Dr. Bence Jones, in one of his lectures on *Materia Medica* at the Royal College of Physicians, said :

“ Each year our knowledge of the chemical composition of these fluids will increase, and with advancing knowledge we shall obtain more clearness regarding the dietetic and medicinal properties of all fermented liquids. At present the answer to the question which is the best wine? cannot be given, because of the imperfect knowledge which we possess of the chemical composition of the different wines.”

The labours of Drs. Thudicum, Dupré, Griffin, and others, are making the composition of wine more generally known, while the increasing number of the profession who are treating disease without the aid of alcohol, will lead, we trust, to its proper use in the practice of medicine, when the routine prescription of wine, or other inebriating liquors, will become matter of history. Enough is already known of the composition of wine to prove that the all-important ingredient in it is ethylic alcohol, and that the alcohol in wine can act as injuriously as it does in other liquors. Wine drinkers are unquestionably spirit drinkers, and it is in vain for them to imagine that they can swallow spirit in the coloured flavoured mixtures termed wine with impunity, any more than they could undisguised brandy. The alcohol in wine can produce intemperate drinking, drunkenness, disease, and other evils the same as are produced by other intoxicating drinks. And looking at the health and the duration of life among the wine-drinking classes, we are convinced that there is ample room for reform in their habits, as well as there is in the habits of the consumers of other inebriating drinks. If we look at the physical or moral condition of wine-drinking countries, we must come to the conclusion that the use of wine is just as inimical to physical and moral excellence as the use of any of the other alcoholic liquors. There is one comfort, however, arising from the consideration of the composition and properties of wine, namely, that it, and all other intoxicating liquors, are alike unnecessary. And as Dr. Pereira states in his *Materia Medica* (p. 71): “ It cannot be denied that the most perfect health is compatible with total abstinence from wine; and that from the use of this liquid various diseases have been produced, kept up, or aggravated.” A still higher authority teaches that wine is a mocker, and that at last it can bite like the serpent and sting like the adder.



## ADMINISTRATION OF ALCOHOLIC LIQUORS TO PAUPER PATIENTS.

Last session Sir Harcourt Johnston moved for, and obtained, a very interesting Parliamentary paper which has lately been published, showing the total quantity and cost of ale, wine and spirits, ordered by medical officers for paupers in each union or parish throughout England and Wales, during the year ended Michaelmas, 1871. The returns, unfortunately, do not give the population of the various unions, &c., nor number of paupers, and, worst of all, fail to supply the actual number of persons who were under treatment during the year. We are, however, furnished with the numbers under treatment during the 39th week in 1871, which no doubt gives a fair average, but the tables would have been far more valuable if the actual number for whom liquor was ordered during the year had been given. This omission might easily be avoided, as each medical officer gives, half-yearly, the number of new cases attended by him, and, with a little additional trouble, the exact number who have been temporarily or continuously ordered liquor might be distinguished. More exact information on these points is extremely important, both in the interests of paupers and ratepayers. It will be shown, presently, that the quantities of liquor given by the medical officers of different unions afford remarkable contrasts. Either the sick and ailing paupers in some districts get sadly too little, or those in others get terribly too much. If too little is given, then an injustice is done to the sick poor; if too much, then not only is a still more serious mischief done to this class, but the ratepayers are also seriously injured. The total cost of the liquor ordered for paupers amounted to above £115,000 during 1871.

So far as strict inquiry has gone, experience proves that (except under very special conditions) the free administration of alcohol tends to aggravate disease and to retard convalescence. The cost of the liquor is, therefore, worse than thrown away. In the case of paupers, very many have been reduced to their miserable plight in consequence of the love of drink, which has grown until it has become an infatuating passion.

Now, if alcohol were kept from these most unfortunate people, they might recover their moral power, their paralysed control might return, the appetite for liquor might be starved out, and the individual be restored to usefulness and independence. Men and women are thrust into the workhouse hospital through drink-caused accidents or drink-caused disease. Amidst the calm order and subduing conditions which prevail in a properly

ordered hospital ward, persons who have been living a feverish and tumultuous life, recover from the whirl and daze they have existed in, and there is then a disposition to reflect and form good resolutions for the future. If the surrounding influences are favourable to moral recovery, the misfortune which sent the victim into the hospital might prove indeed to be a blessing in disguise.

But the administration of drink frustrates this. The appetite is kept alive, whilst the recommendation of the medical man is not only a warrant for use during future life, but "the doctor ordered me to take it," silences all gainsayers.

One of the striking features in this return is seen in the very different quantities of liquor which pauper patients receive in different places. For example, Berkshire and Cumberland are pretty much alike in population; we find, according to the returns, that whilst during the year ended Michaelmas, 1871, the sick paupers of Cumberland were ordered liquors which cost £327 4s. 9d., the same class in Berkshire cost £3,490. Or we may contrast Cornwall and Sussex, both naturally salubrious districts, Cornwall containing the larger population by some thousands. The cost of stimulants for sick paupers in Cornwall during the period named amounted to £404 12s. 10d.; whilst in Sussex it amounted to £5,081 15s. 2d., an increase of over 1,200 per cent. As has been said, the returns do not give the exact numbers of sick during the twelve months, but they are given for the 39th week, and they may be accepted as an average for the year, of indoor and outdoor cases, receiving some form of alcoholic liquor, by medical order.

The numbers stand thus:—

Berkshire...	...	...	...	...	1,730
Cumberland	...	...	...	...	632 or

These figures show that the cases in which liquors are ordered by medical prescription, in the Berkshire union, are about two and a half times greater than they are in Cumberland.

If we contrast Cornwall and Suffolk, we find even this disparity exceeded.

Number of indoor and outdoor cases on medical officers' books, for whom liquor was ordered during 39th week, 1871:—

Sussex	...	...	...	...	3,246
Cornwall	...	...	...	...	1,096

But perhaps the most curious return relates to the numbers of paupers on the medical lists who were allowed ale, wine, or spirits during the last three months of the year ending Michaelmas, 1871. These are as follows:—

Berkshire:	Ale	377;	Wine	75;	Spirits	131
Cumberland:	„	2;	„	35;	„	15

The following abstract will show that the contrast between the two other counties we have noticed, the population being nearly equal, is similarly striking.

Numbers of cases on union medical officers' books allowed liquor continuously during the 13 weeks ending Michaelmas, 1871:—

Sussex :	Ale	656 ;	Wine	96 ;	Spirits	234
Cornwall :	„	39 ;	„	14 ;	„	16

By selecting some of the individual unions, still more special contrasts might be found, but the aggregates are sufficiently instructive.

The cases now cited show very clearly two things:—First, that the number of sick paupers is immensely greater in Berks and Sussex, than in Cornwall and Cumberland; and,—Second, that in the two former counties the medical administration of liquors to paupers is much more common than in the latter.

It is desirable that attention should be called to another curious contrast presented by the counties selected for comment and illustration.

It appears that whilst the Berks workhouse officials were allowed 42,659 pints of beer during the twelve months, no liquor whatever was allowed to the Cumberland officials. In the Sussex workhouses the officials consumed 73,048 pints of ale, and 75½ pints of spirits. In only one of the Cornish workhouses was any liquor allowed, and the whole amount consumed only amounted to 16 pints of ale. We are informed in a footnote that at St. Austell all the officers are total abstainers. There is no mention, as in some other instances, that money is allowed instead of beer.

The truth is that Cumberland and Cornwall are remarkably sober counties, whilst it is well known that beer-drinking is freely practised in Berks and Sussex. Here then we have one reason why there are so many more sick paupers in the two latter than in the two former counties. But the free use of liquors in society leads to its free administration to the sick, and its free administration to the sick leads to aggravation of disease and retardation of recovery, and, therefore, to the accumulation of cases on the sick lists of the medical officers of public institutions where liquor is freely prescribed.

At Wrexham, at Liverpool, and elsewhere, it has been shown that with the diminished prescription of liquors, the death-rate has diminished, and the progress of convalescence has been expedited. It is to be hoped that each year such returns as those quoted from, will be published, and that the evidence furnished will aid in revolutionising the practice of many medical men.

## Miscellaneous Communications.



### THE SEMEIOLOGY OF CHRONIC ALCOHOLISM.

BY ALFRED H. M'CLINTOCK, M.D.

AN important debate on this subject took place at a recent meeting of the Medical Society of the College of Physicians in Dublin, Mr. Fitzpatrick in the chair. An abstract of the debate was published in the *Medical Press*, and the last number of the *Dublin Medical Journal* contains the transactions of the Society, from which we take the account of the debate on alcoholism. It was opened by the following paper:—

In bringing under the notice of the Medical Society the great subject of alcoholism, I wish at the outset to dispel any idea that I am about to submit an elaborate compilation or original essay. To do either the one or the other is quite out of my power. All I aim at is to look at it from one point of view—to study one of its aspects which, I think, possesses a high degree of practical importance.

It is a matter of notoriety that the immoderate use of diffusible stimulants has greatly increased of late years among classes whose education and social condition should have been sufficient preservation against this destructive vice. It is well known to physicians that alcoholism is to be met with among the occupants of drawing-rooms as well as the frequenters of tap-rooms. What has so widely spread this pernicious habit among the present generation, it would be difficult to say. Probably more causes than one have contributed to bring it about. I cannot help thinking that the intense strain put on the intellectual faculties in every profession, trade, and pursuit, the mental competition of these days,

must create or foster an appetite for diffusible stimulants. Nervous exhaustion craves for the alcoholic stimulus; whereas physical or muscular exhaustion will more eagerly demand solid aliment. Furthermore, to be candid, I must own to a feeling that our own profession is not wholly free of blame in this matter. I know well I am here trenching on delicate ground, but "*amicus Plato, amicus Socrates, magis amica veritas*," and I strongly suspect that the modern treatment of disease by the free use of stimulants, though fulfilling an important therapeutic indication, has occasionally developed a morbid habit or taste, eventuating in moral and physical disease of an incurable kind. I would qualify this, however, by adding that the declaration of inebriates themselves on this point is of no value whatever, as they are notoriously untruthful, and are always but too glad to throw the blame of their evil habit on the physician or surgeon.

If there be any foundation for the above suspicion—and nothing would give me more satisfaction than that it should be disproved—it certainly increases the responsibility resting on us to discover this pernicious habit whenever we can, and to use our utmost endeavours to eradicate it.

But, even in the absence of any moral considerations of this kind, a regard for our professional character and for the credit of our art should stimulate us to acquire a knowledge of all the symptoms which may attend, in varying degrees, on the habit in question, so as to be able to distinguish them from the effects of idio-

pathic disease, and to trace them to their true source.

The term alcoholism was first used by Magnus Huss, of Stockholm, about the year 1852, and has been adopted by succeeding writers, French and English; and perhaps no better term could be employed to express the pathological effects of over-indulgence in the use of diffusible stimulants. He describes two forms of alcoholism, viz., the acute and the chronic. Of the former (*i.e.* acute alcoholism) we have the best and highest example in delirium tremens; but every case of drunkenness should fall, I think, under the same head, and, properly speaking, is an instance of acute alcoholism.

Chronic alcoholism, according to the sense in which Huss, Marcet, and other writers use the term, expresses a train of symptoms belonging to the nervous system, which symptoms may continue to be developed long after the pernicious habit has been relinquished. Now, I think it will be freely admitted that a large class of cases are met with of deranged *organic* functions, which derangements are the direct result of the abuse of spirits in some form or other.

These cases constitute a numerous category, and it is chiefly of their symptoms I attempt to give a brief description.

The task, then, I have proposed to myself in this paper is comparatively a very narrow one: briefly to pass in review the effects which are produced on the bodily functions by intemperance; in other words, the symptoms and disturbances which it gives rise to, and by which the baneful vice may be suspected or discovered. To form a correct opinion on this point is assuredly of much importance, as failing in this we may commit serious errors of diagnosis and prognosis, and expose ourselves and our art to ridicule and contempt. In every instance coming before us we need to see well that the grounds of our diagnosis are sure, before breathing a suspicion that would tend to criminate the patient; and even when fully confident in the correctness of our opinion, the utmost

tact, delicacy, and circumspection are often requisite in the mode of communicating it to patients or their friends. It must be remembered that all these patients, with scarcely one exception, conceal how much they drink over and above the limit of moderation, and will deny in the most emphatic and persistent manner that the quantity is at all inordinate. Herein lies the source of our greatest difficulty in dealing with them. The utter disregard of truth evinced by most of them when questioned about their ruling vice, is one of the most striking and melancholy features of moral depravity which they present. I have seen a lady of education and refinement, and the mother of a large family, protest most solemnly that there was not the slightest foundation for my suspicion, and even when confronted with the half-finished bottle of brandy, brought forth from its hiding-place, and by the messenger she had sent to purchase it, still, with unblushing assurance, did she resist the direct and circumstantial evidence which proved her a liar of the deepest dye!

To my mind the demoralising, debasing effects of intemperance, cannot be more strongly shown than by this extinction of the principle of truthfulness—a principle which lies at the foundation of all morality. On this point Dr. Skae, in his essay on *Dipsomania* (*Winslow's Journal*, vol xi.) thus graphically expresses himself:—

“Such persons are singularly mendacious. They will resort to every possible device to procure stimulants, to excuse their conduct, to deceive their friends and medical attendant, and will display an ingenuity and fertility in deceit which is truly marvellous.” . . . “They will evade the most vigilant surveillance, and tell the most deliberate falsehoods in their attempts to deceive, solemnly appealing to God for their truth. When shut off from the ordinary sources of stimulation they will sometimes resort to almost anything in order to relieve their craving. I have known a young and delicate lady, after being prevented getting wine or spirits, and

deprived of red lavender, lavender water, and eau de Cologne, take creosote, vinegar, vitriol and tobacco."

In an inquiry like the present we need not stop to consider whether, or how far, alcoholism is the result of a vice or of a disease, though I admit the importance of such a distinction in a medico-legal point of view, as well as in legislating for inebriates.

With regard to the effects of spirituous liquors on the health and constitution, we might divide all drinkers into three classes:—

1st. Those who partake of them in moderation, and who are benefited by their use. Thus, Dr. Thomas King Chambers, in summing up the results of some carefully conducted experiments, speaks on this wise:—"In short, the circumstances seem to indicate that a moderate dose of alcohol acts by temporarily augmenting the digestive power of the stomach, helping it to appropriate more thoroughly the food."

The 2nd class are those who partake of alcoholic liquors in larger quantity and for a lengthened period, and who, consequently, may be said to be intemperate, although they do not, perhaps, at any one time, drink to such excess as to lay themselves open to the charge of being "drunk and incapable," or "drunk and disorderly," or, indeed, of being drunk at all, in the true sense of the word. They are guilty of excess by the total quantity consumed in the twenty-four hours, and not by that taken on any one occasion. To this class of drinkers, I believe, belong a large proportion of the cases of chronic alcoholism, met with in the upper ranks of society, and especially among females of this rank.

Furthermore, it would seem demonstrable that the intemperance of the upper classes in the present day consists very much in the oft repeated ingestion of some kind of alcoholic stimulants—whether it be wine, spirits, or the favourite B. S. (brandy and soda). In this respect the practice of our contemporaries differs much from that of our forefathers, who confined their potations to after dinner, and, as

a rule, took little or nothing before that time. Which system inflicts more injury on the health is a question that might admit of considerable discussion, and though it does not properly fall within the scope of this paper, I may just remark, *en passant*, that the testimony of Dr. King Chambers, who has been at some pains to investigate the actions of alcohol upon the economy, goes far to show that small and frequently repeated stimulation is much the more injurious mode of taking alcohol. "It is very clear," he observes, "that alcohol, taken in the dram-drinker's fashion, in small divided doses, by no means increases metamorphosis. It rather tends to diminish it, and this diminution is not sudden or immediate, but is more and more, for a certain period, till the retention reaches a point at which a critical discharge takes place in healthy persons." And, again, when laying down rules for the use of alcohol in diseases, he enjoins, "Divide the daily allowance into two or three doses only, giving enough at once to produce a decided effect. The action of frequent small divided drams . . . is to produce the greatest amount of harm of which the alcohol is capable, combined with the least amount of good."

Of the evil effects of drinking in the early part of the day he uses the following decided language:—"I have not yet met with a forenoon tippler, even though he never got drunk in his life, without a condition of stomach which most infallibly shortened his days."

The 3rd class of drinkers comprehends those whose allowance of liquor is so immoderate as to produce full intoxication. These are the out-and-out drunkards, who drink without shame or compunction, and who know not any limit to their debauch but the length of their purses or the capacity of their stomachs. In such cases as these there is generally much less difficulty in coming at a knowledge of the habits of the individual than in persons of the second class, whose rule of drinking seems to be "a little and often."

Nearly all the cases of alcoholism which have fallen under my immediate observation were females of the better class in society. All, with scarcely any exception, concealed the habit they had acquired of drinking to excess, so that it often needed a lengthened investigation and a careful analysis of all the symptoms, before any positive conclusion, as to the real cause of the patient's condition, could be arrived at.

All sought medical advice on account of some derangement belonging to the alcoholism, though apparently not themselves recognising the source from whence their ailment sprang. I should qualify this by saying that a few were brought by friends who had no suspicion of the patient's habits. The intoxicating liquors taken varied a good deal, viz., brandy, gin, champagne, port, sherry, whiskey, ale, porter, and, in one case, tincture of ginger—of which her daily allowance, for a length of time, was one pint. This unfortunate lady, who moved in a high circle, and was what is ordinarily called a strong-minded person, eventually died of jaundice, enlarged liver, and ascites. It is very well known that where the ordinary spirits cannot be obtained, the victims of this passion will not hesitate to drink eau-de-Cologne, lavender water, sal volatile, compound spirits of lavender, and, in fact, any spirit they can lay their hands on. Most of us here have known, or heard of the museum porter at one of our schools of medicine, who used to drink the spirits of wine off the anatomical preparations, when he had not the means of buying a more potable description of alcohol. In justice to his palate I must add that this was before the methylated spirits came into use.

The ingenuity displayed by many of these individuals to hide the vice, and elude the precaution for keeping away the much coveted drink, is sometimes most curious. For example, a lady with this propensity very strong, was strictly confined to one room by her family, who allowed nothing to enter without its being carefully searched for the contraband article;

nevertheless, in spite of all these precautions she managed to have spirits conveyed to her, not, indeed, in a bottle, jar, or jug, but in the undisguised and unsuspected *pot de chambre*!

Of my patients the youngest was a girl of nineteen, whose mother died from the effects of intemperance. Nearly half the number were widows. Four cases have come under my immediate observation where death took place in consequence of organic diseases induced apparently by the long continued use of intoxicating liquors. One of these cases I have already alluded to, as dying of jaundice, anasarca, ascites, and enlarged liver. Another, with fatty enlargement of the liver, died of exhaustion from long continued vomiting; and two died of cirrhosis of the liver and dropsy.

According to Dr. Marcet, "women appear to be much less subject to suffer from the long continued abuse of alcoholic liquors than men;" "but," says Dr. Forbes Winslow, "if the effect of the vicious habit be measured by the mortality, it will be seen from Mr. Neison's data that the reverse is probably the truth."

I now come to speak of the *symptoms*. And here I cannot help remarking that many writers of the highest authority on this subject—for example, Huss, Winslow, Anstie, Skae, Marcet, Leon, Thomeuf, &c., have confined their observations to the effects of alcohol on the nervous system, and give us little or no information about its effects on the liver, stomach, kidneys, intestinal canal, skin, and other parts subservient to *organic* life. Chiefly to this latter group, therefore, I purpose confining my observations, as I could add nothing to what the foregoing and many other authors have written in regard to the effects of acute and chronic alcoholism on the functions of *animal* life.

1. With persons given to excess in the use of alcohol, there is a peculiar odour of the breath so characteristic that, from it alone, one may almost predict the habits of the individual. It possesses somewhat of an ethereal taint,

and has, at times, a strong resemblance to the odour given off in saccharine fermentation. Once perceived it is not readily forgotten or mistaken. Its presence always admits of detection, and, when detected, it suggests the direction our inquiries ought to take. Guided by this symptom, I have many a time been saved from committing blunders of diagnosis and treatment. It has awakened the first suspicion, and thus supplied the first clue to the real cause of the patient's ailments. These patients are generally themselves conscious of their breath being impure, and they will artfully try to prevent your getting a full whiff of it; hence, an averted mouth, or the hand kept on it when speaking, may sometimes enable one to suspect the patient's habits, even before catching the odour of the breath. In reference to this point, Dr. Anstie writes, "One symptom is not easy to explain, but which nearly always exists, even where there are no signs of dyspepsia, is a peculiar foul breath smell, which it is impossible to describe, or to mistake when once it has been smelt. It is quite unlike the odour of the alcoholic liquor itself, and may be separately distinguished, even where the latter is also present."

The experiments of Lallemand, Perrin, Duroy, and others, seem to show that alcohol undergoes no chemical change in its passage through the body, and that none of it remains behind. Now, the character of the breath I have described, is only observable for a comparatively limited time—some hours probably—after the ingestion of alcohol, and is, perhaps, due to its presence in the expired air. This might go far to account for the cough which, according to Dr. Craigie, is an invariable symptom with all spirit drinkers.

2. Vomiting, as every one knows, is a common effect of a drunken debauch. But vomiting may also present itself in a more persistent way in consequence of the immoderate, though not intoxicating, use of stimulants. The irritability of the stomach is often such that for many hours the organ will not tolerate the smallest quantity

of the blandest fluid. Some of the worst cases I have ever met with of persistent convulsive vomiting were of this kind. In one instance—that of a young married woman—the protracted violent efforts of vomiting and retching were most painful to witness, and well nigh threatened to extinguish life by their uncontrollable severity and long continuance. This patient used to take about a flask of brandy, with a free allowance of champagne in the twenty-four hours, but yet never presented the appearances of intoxication. She died of exhaustion in one of these attacks, and the necropsy revealed *no disease of the stomach beyond some slight congestion*, but the liver was somewhat fatty. Dr. Chambers relates the case of a lady dying under precisely similar circumstances. The symptoms "were those of simply retching and sinking, and the nature of the case was made apparent by her desiring her maid to bring her a glass of brandy, even while I was speaking to her."—(Case XCI.)

This alcoholic vomiting may, to a certain extent, admit of being recognised, by its coming on in the morning and forenoon—by its extreme severity—and by its independence of any organic lesion, or other discoverable cause, such as pregnancy or Bright's disease. At the same time we must take into our consideration all the accompanying symptoms and circumstances of the patient, that we may see how far these confirm or negative the above conclusion.

The morning sickness, in Dr. Anstie's opinion, "is not a mere dyspeptic disorder, but a true part of the nervous phenomena of a receding narcosis."

Along with this symptom there often exists, as Dr. Budd has remarked, an inflammatory or catarrhal condition of the gastric mucous membrane, which may give rise to flatulence, loss of appetite, and other disorders of digestion so common in persons addicted to intemperance.

3. There is undoubtedly a form of diarrhœa occasionally induced by acute chronic alcoholism, and long before any structural disease has taken place

in the stomach or liver. After any excess in the use of alcoholic beverages many persons get an attack of diarrhœa, and this from its cause has received the epithet of crapulous diarrhœa. It would seem to be excited in consequence of the pylorus allowing the food to pass in an undigested state, so that it acts as an irritant to the intestinal canal, causing increased exhalation and peristaltic action, accompanied by pain and griping. Examination of the fæces shows the imperfectly digested state of the food, which is commonly acid, and sometimes putrid, from an insufficient admixture of bile to prevent decomposition. Besides this crapulous form, diarrhœa is sometimes met with in other cases of chronic alcoholism, even where the intemperance is of a moderate kind, never amounting to intoxication. Here I cannot attach to it any peculiar or pathognomic characters. It would seem to be the consequence of a congested and irritable condition of the intestinal mucous membrane, so that very trifling causes are sufficient to provoke increased action of the bowels; and this increased action is generally more troublesome early in the morning or in the forenoon. I have seen this kind of diarrhœa kept up for months by the habit of taking a "night cap" of brandy or whiskey at bedtime; and to be permanently cured by giving up this hurtful practice.

4. Nothing is more common in persons of intemperate habits of every degree, than a slight tinge of jaundice, seldom amounting to more than what would be called a bilious hue in the conjunctivæ. This sometimes succeeds to vomiting (and may occur no matter what has caused the vomiting); and it may result from organic disease of the liver, induced by the prolonged use of alcoholic drinks; but, independently of these classes of cases, we meet with it as a symptom of chronic alcoholism. The non-elimination of this bile, whose retention in the blood causes the jaundice, is, most probably, due to the influence of alcohol in retarding or diminishing vital metamorphosis. This icterode

tinge of the sclerotic is well known to be a very constant and characteristic feature of the habitual drunkard's physiognomy; but even in the milder cases of intemperance it is occasionally present, and thus serves to aid our diagnosis.

5. I am disposed to think that among the class of moderate drinkers, the appearance of acne in any of its forms is rather exceptional; still the occurrence of acne on the forehead or nose—I do not so much suspect it on the chin—should awaken a suspicion that all is not right, and urge on further inquiries in the alcoholic direction. I have seen marked examples of acne indurata and acne rosacea, induced by the habit of taking spirits at bedtime; which entirely subsided when this habit was given up. This recalls to my mind the case of a young lady I attended for some time on account of indigestion, and frequently recurring acne on the lower part of the face. She seemed to derive little benefit from all the medication and careful regulation of her diet. In truth, her age, her social rank, and refined manners, lulled every suspicion that crossed my mind. At length, she accidentally dropped the observation that no anodyne was so effectual as gin, in relieving her nocturnal wakefulness and fidgetiness—symptoms, I may here remark, which are very often complained of in all cases of alcoholism. This admission led me to cross-examine her a little more closely, when I made out that she was accustomed to take a wine-glassful of raw gin on going into bed, "just to make her sleep," as she mildly expressed it. On making this discovery regarding her habits, I own that I was candid and foolish enough to pronounce, on grounds moral and physical, a strong disapproval of the practice in question. What the effect of this lecture was upon the patient I had no opportunity of knowing, as I was never asked to renew my visits. *Verbum satis sapientibus!*

6. There is not much, I think, to be learned from observation of the pulse in these cases, unless we happen

to see the patient when under the stimulating influence of drink, at which time the pulse will be found greatly accelerated, even though the patient may be far from intoxication. This vascular excitement, without any morbid lesion to account for it, would then become a very suspicious circumstance. Most observers agree in representing the pulse to be rather slow and feeble during the intervals of intemperance, but yet not exhibiting any pathognomonic character.

7. There is a group of nervous symptoms, two or more of which are pretty constantly present in chronic alcoholism. For reasons already mentioned, I only advert to these in a general way, just to complete the enumeration of symptoms which may attend upon chronic alcoholism, and thus aid in its recognition. This group comprises the following:—Extreme nervousness; sleeplessness; fidgetiness; muscular tremors; hallucinations of sight or hearing; and epileptiform seizures. Of this last symptom I have only met with one example. The attacks had come on after the patient—a married lady, aged twenty-five—had been tippling for two years. She presented many of the other symptoms of alcoholism. I may just mention she was almost the only patient I ever met who confessed—though not before she was charged with it—to being guilty of intemperance.

A word as to muscular tremor. Some writers regard this as the most constant and reliable sign of alcoholism. It is true we may have the same symptom arising from mercurial intoxication, from paralysis, and from pure senility; so that, *per se*, the tremor is not pathognomonic of alcoholism. Nevertheless, the alcoholic tremor generally admits of easy recognition. It may amount to a state of universal rigor, or show itself in the unsteady gait, or faltering prehensile power; it can be suspended under the influence of strong maniacal excitement, and persist during extreme agitation; and sleep has much less effect in stopping it than in stopping the movements of chorea. It is not

so apt to accompany alcoholic delirium coming on in the course of another disease, as when this delirium attacks a person otherwise healthy.

Among soldiers a common test of a man's sobriety is his ability to hold the index and thumb steadily apart at a distance just sufficient to let the light be seen betwixt them and no more. Notwithstanding this long list of symptoms, it must be confessed that many cases will come before us where we may suspect intemperance, but yet find it hard to prove it. Nay more, chronic alcoholism may exist and yet not reveal itself by any symptom. This latent alcoholic saturation, as Trousseau calls it, possesses peculiar interest for the physician, as it may declare itself by its effects at a critical moment when the patient is attacked, for instance, with some acute disease, and then the alcoholism shows itself by an unexpected delirium or by an ataxic condition out of all proportion to the severity of the organic disease.

I fear I have trespassed too long on the time of the Association. Let me now bring this crude ill-digested paper to a close, but not before I ask your indulgence towards its many faults of omission and of commission.

The Chairman looked upon Dr. M'Clintock's paper as one of the most interesting communications that had been laid before the Society for a long period. It dealt with a very obscure subject, and one that delighted in secresy, and the more information they obtained upon it the more likely were they in the practice of the profession to render service to their patients. He, unfortunately, had some extensive observations of the effects of intoxicating liquors, from being connected with a lunatic asylum, and he could bear out what Dr. M'Clintock had said—that these were cases which had organic origin, and had led to that miserable and degrading vice. He could not say that it was confined to any particular class of females, as far as being married or unmarried was concerned; but it was generally to be found among

the unmarried females who had arrived at a certain age. It would appear that, when the most important function of the uterus was not fulfilled, there was then a disposition for the reception of stimulants, and these cases presented the greatest difficulty in being relieved. He, however, had one case under his care in which the patient evinced the worst possible form of addiction to this vice, and after being in the asylum some time she became reformed, and for four years had remained perfectly well, and in mental health, and never returned to her former vice. These cases were therefore not to be looked upon as incurable.

Dr. Stewart was glad to hear the President say he had seen one recovery in the case of a female. He (Dr. Stewart) had had a large experience of lunatics, and had seen many painful cases of alcoholism among them; but he had never met with one instance of the recovery of a female.

Dr. John Eustace did not think he had ever listened to a paper with more interest than he had done to Dr. M'Clintock's valuable communication; but there was one view of the question which he rather expected Dr. M'Clintock would have directed his attention to—and with which he was particularly qualified to deal—namely, with regard to the hereditary transmission of the disease. Having met with a great number of these cases (on account of being a specialist in some degree) the impression had been made on his mind, from the history of them, that almost the largest proportion of these cases could be traced back to hereditary transmission. He thought the view which had been brought before them with regard to the peculiar odour of the breath, was one of great importance. It was a feature in those cases which he invariably observed, but he did not agree with Dr. M'Clintock that the patients desired to conceal their breath from the observation of the physician, for they had sometimes cast it upon him as a boast, saying, "you will get no smell of drink off my breath;" and the fact was as they had said. He remem-

bered a medical man of some eminence in this city who was under his care some years ago. In that case his attacks presented all the appearances of fever, and for a number of years, when abroad and travelling in England, he had been treated by some of the most eminent medical men for fever. He happened to come to some Dublin doctors, who, knowing more about the matter than he supposed, decided that their poor brother's case was one of intemperance. When placed under his (Dr. Eustace's) care, they trusted somewhat to his honour not to drink, and the consequence (as might indeed have been expected) was that he had an attack of fever. He had the tongue and the pulse of fever, but there was the peculiar ethereal odour from his breath that indicated the real cause of his illness. Yet he declared, with tears and oaths, that he was suffering from fever. He (Dr. Eustace) had a most careful search made, and even when the brandy bottle was produced, not half empty, as in the case described by Dr. M'Clintock, but altogether empty, he declared it was a false charge against him, and threatened an action for defamation of character. That gentleman invariably appealed to his breath to show that he had not taken drink. There was another point he wished to mention. With regard to the treatment of these cases, he had found it was best to discontinue the poison as soon as possible; and if the patients could be induced to take plenty of food they would soon be got all right. There was a morbid appetite for food in many of these patients, and if the patients could be got to indulge in it, it might take the place of the appetite for drink. In the Swedish legislature advantage had been taken of that fact, and publicans there were licensed on condition that they would supply cooked food to all persons frequenting their houses, they having a profit on the cooked food, and the state having a profit on the drink. The publicans, therefore, in their own interests, became advocates of temperance. He thought the Society ought to unite to put pressure on Dr. M'Clintock to

investigate the hereditary tendency of the disease, which is quite a matter within his province.

Dr. H. Kennedy thought that, in these cases of alcoholism, there was something in the constitution of the individual which led to the vice. Every one must be struck with the fact that persons equally exposed to temptation would not fall into drinking habits; and precisely the same was true of tobacco; every one could get these things, but all did not choose them. Hence, he thought it was something peculiar in the temperament of the individuals that led them to drink. A deranged nervous system might lead gradually to the use of stimulants; but there was something totally independent of that; for, in the case of females, it could not be supposed there was such a strain on their nervous system as to lead to those habits. Therefore, it appeared to him, that there was a certain kind of constitution which had a tendency to run to drinking. His experience of the administration of wine and spirits to patients in hospitals did not show that it had led those persons into bad habits. The poorer classes who were treated in hospitals did not like wine, and if they did, could not get it; but, he thought he had known some instances among people of a higher class in society, where the ordering of stimulants as medicine had led to drunkenness. With regard to Dr. Eustace's remarks of the hereditary character of this complaint, he believed there was sufficient evidence to show that a drunken father was likely to be succeeded by a drunken son. On many occasions, more formerly than of late years, he had committed the mistake of overlooking cases of this sort. The tipping was generally so well concealed, and the surrounding circumstances were so totally inconsistent with the idea that the individuals would fall into drink, that the physician should ever be on his guard. The point of the latency of the effects of alcoholism was important. Persons addicted to this vice often went on for a long time apparently well, until they meet with some trivial accident, when

the wound or general symptoms assumed a form that showed the latent alcoholism.

Dr. Nixon said, as regards the symptoms and signs so valuable in the diagnosis of alcoholism, he wished to ask Dr. M'Clintock if he recognised another one—he alluded to a peculiar œdematous condition of the face, a flabby condition of the muscles. He (Dr. Nixon) had noticed this frequently at the hospital and dispensary, and from it arrived at a conclusion which proved to be correct, that the patient was the subject of chronic alcoholism. The muscles of expression were entirely lost, and there was that flabby condition of the face so often seen in the debauchee.

Dr. Aquilla Smith said there was nothing more universally admitted than the fact that, in our time, intemperance had greatly increased among the better classes of society. His friend, Dr. M'Clintock, however, did not enter into a consideration of the causes of that undue amount of intemperance. It was a good while ago since he read a paper upon the improper use of alcoholic drink, by an eminent physician, Dr. Rush, who flourished at the close of the last century. He recollected distinctly that Dr. Rush, who was admittedly the most eminent practitioner in America in his time, had foreseen the danger that might arise from medical men sanctioning the use of whiskey as a remedial agent in the treatment of patients. He did not admit at all that the physician, by ordering stimulants, led to habits of intemperance, but he foresaw that the charge might be made against them; and they all knew it was the common dodge among the better class addicted to immoderate indulgence in drink, to say that their physician had ordered them to use stimulants freely, and that this had led them into the habit. He did not believe the medical profession was greatly to blame in the matter; and he looked upon these statements as a mere device which these people had adopted in order to screen themselves from the imputation. He had met with several instances where that was

the apology the drunkard made for his indulgence in this vice. Among the causes which had led to intemperance among the higher classes was the total change of habits. In his early days there was no such thing known among young men as soda-water and brandy, and sherry and bitters, and he saw too many instances now of the evil of indulging in these stimulants frequently during the day. The habit had probably come from America, and was one of the causes of the great increase in intemperance. He was old enough to recollect when the habits of the better classes were very different from what they now are. When a young man, he had known of parties where the door was locked and no one allowed to go out until he had drunk as much as the host thought proper. He knew many persons who lived to be seventy, seventy-five, and eighty years of age, who enjoyed good health and were active, vigorous men, and yet were in the habit of drinking many tumblers of punch every day, but they never touched a drop before dinner. It was well known that the danger to health was greater by taking small quantities of spirits frequently than by drinking occasionally to excess. He would succeed in time in killing any man if he gave him a teaspoon of whiskey every hour in the day, whereas four tumblers of punch after his dinner might not do him any harm. The frequency of taking small doses of spirits was one of the great causes that led to organic disease. He believed there was the peculiar odour in the breath of drunkards referred to by Dr. M'Clintock; but his (Dr. Smith's) suspicions were more frequently raised by finding a smell of carraways and peppermint in the patient's breath. The mendacity of the victims of alcoholism was notorious, and they often showed wonderful skill and ingenuity in obtaining drink. The other day a man was admitted to Dun's Hospital suffering from painter's colic. He thought, or said that he thought, he was labouring under a difficulty of passing water, and asked for some gin to enable him to do so. He (Dr. Smith) refused to give him

any, and said he would order him a mixture that would have the desired effect, and when the man found he could not get the gin his kidneys began to act well. The mendacity displayed by these people was a consequence of the demoralised state they had been brought to by an insatiable thirst for intoxicating drink. As to the circular to which Dr. M'Clintock had referred, he felt ashamed of the medical profession falling into such a trap, and he thought many had signed to get rid of the importunity of the persons who hawked it about, and who published it to serve their own objects.

Dr. Finny wished to call attention, as an aid to diagnosis, to the connection which intemperance bore to insanity, or such diseases as were due to nervous disorganisation. Some members of a family he attended had shown the symptoms of alcoholism, while others had shown nervous diseases, neuralgia, epileptiform convulsions, and dementia. He had to deal with these cases rather as a disease of the mind than a vice of habit. One point among ladies who suffered from various nervous symptoms he had noticed to be the great relief they derived from tea and such like stimulants, and he found that very often they varied the tea with champagne, and in this manner produced symptoms of alcoholism. In one of these cases both husband and wife were affected. The wife called on him one day to know how to overcome the vice of the husband, she herself having been under his care from the effects of the same thing! He had often noticed the smell on the breath of such patients, but he did not know its cause or its value as a diagnostic until now, and he had, therefore, derived that information from the present discussion. He thought the idea that alcohol prescribed as medicine had been the cause of bringing on this vice had been most unfairly urged, and in many instances made a screen behind which to hide themselves by habitual drunkards. He believed the true safeguard against such a danger in prescribing stimulants was to order

them only to be taken along with either medicine or food.

Dr. McClinton thanked the Society for the kind way in which they had received his paper. The subject was one of the most extensive kind, and the difficulty was to confine himself to any one branch of it, and to resist the temptation to follow out others which presented themselves for consideration. He might have adduced a great many clinical illustrations of chronic alcoholism and its results, but it would have extended his paper to undue length. He knew that in bringing the subject forward in any one shape he could not fail to elicit much interesting discussion, and he was glad the speakers had not confined themselves to what was the special drift of his communication. It had often been stated that though there is hope in reclaiming a male drunkard, you will never reclaim a female. He had, however, known one or two cases of women having been reclaimed. One lady had gone very far. She then got a very serious illness from which she narrowly recovered, and from that time she had completely given up drink, and now enjoys good health. It was, however, almost a solitary instance in his own experience. With regard to the hereditary transmission of the propensity to intemperance, that was a subject which, in our own day, had engaged a great deal of attention, and it seemed to be very generally admitted, that if we look into the history of persons who were drunkards, we shall find that the propensity had shown itself in some of their ancestors. As to what Dr. Eustace said about drunkards asking the physician to smell their breath in proof of their sobriety, the fact was, that sometimes they were not themselves aware that their breath had the peculiar ethereal smell, or that it indicated habitual intemperance, and appealed to the test, knowing that the smell of raw spirits would not be got from them at the time. A strong odour of carraway seeds or of cloves (as Dr. Smith mentioned) was also a

very suspicious indication, being almost always taken to conceal the smell of spirits or tobacco. As to the puffy condition about the eyelids, referred to by Dr. Nixon, that was more to be found in confirmed drunkards where alcoholic cachexia, had come on, and no doubt it was a striking feature in the alcoholic physiognomy, and was generally accompanied by œdema of the conjunctivæ. Although it was possible some blame might occasionally be attributed to medical men for incautiously prescribing stimulants, and thus creating an appetite for them, yet we should not accept the statements of drunkards themselves on this point, as their mendacity is too notorious! Often a stimulant was ordered by the medical man to overcome some degree of weakness or sinking, and patients very soon found out that a little brandy, or whiskey, or wine, was equally effectual in remedying that distressing prostration or sinking. Of course the more frequently they took these diffusible stimulants the more necessity they felt for resorting to them. In most of these instances it was not for the mere pleasure of swallowing these stimulants that they were taken, but to remove an overwhelming feeling of depression or sinking. As to the *causes* that led to excessive drinking, the question was a very interesting one. He only alluded to one of them—the intense intellectual activity and competition of these times. He must, however, admit with Dr. H. Kennedy that this would not so strongly apply to the cases of intemperance among women. The question would afford ample scope for a special inquiry, and to the philanthropist, the legislator, and the physician it was one of the deepest importance. He did not touch in his paper on *treatment*. He thought, however, it was a great mistake not to discontinue completely and entirely the taking of spirits, in all cases of alcoholism. He believed no injury would arise from totally and abruptly withholding it from the patient.—*The Doctor*, May 1, 1872.

## ON THE USE OF ALCOHOLIC STIMULANTS BY NURSING MOTHERS.

BY WILLIAM E. BESSEY, M.D.

PERHAPS there is no more grave or pernicious error in the modern practice of physic than the habit of recommending the use of alcoholic stimulants to nursing mothers. It is unsound in principle, unwise in practice, and must appear, on a little observation, to an unbiased mind, to be not merely unsafe, but positively harmful and pernicious in its influence upon both mother and offspring.

It is wrong in principle—because administered or recommended as it is, to improve and augment the lactic secretion in the mother, it holds out a promise of being able to effect—in what way we are not told—an improvement in both the quality and quantity of the mammary secretion. How or in what manner has never been explained. The whole theory is a fallacy based upon mere assumption, and unsupported by the practical tests of observation and experience.

It is true that alcohol, and especially malt liquors, are powerful stimulants to the glandular organs of the body, although invariably followed by a state of reaction corresponding with a degree of excitement by which it had been preceded. The excitement thus produced in the mammary glands is, of course, attended with an increase in their secretion; but this has reference only to the quantity—an increase in the watery portion of the fluid takes place undoubtedly; but the *casseine*, on the contrary, or muscle-making element in the secretion, is diminished. This may be verified by any one who may be disposed to take the trouble. Alcohol, pure and simple, also exists in the milk of women making use of alcoholic beverage of any kind, and by its presence there, being imbibed with the lactiferous secretion, it injures the delicate membrane of the child's stomach, lays the foundation of a future appetite for strong drink, and is productive of

the most serious disorders which belong to infancy and childhood.

Upon the analysis of the milk of a nursing woman, after allowing for the effect of the various circumstances which may affect the relative proportions of the several constituents of the healthy human milk, such as age, temperament, period of lactation, position and circumstances in life, food, drink, &c., it will be found that the healthy quality of the secretion has been much deteriorated.

In milk of healthy women the water may range from 879 to 905; the solid constituents from 120 to 94; butter from 25 to 42; *casseine* from 15 to 39; sugar of milk from 31 to 45; salts from 1 to 4 parts in 1,000. These proportions are materially altered by the use of alcoholic beverages.

On the analysis of the milk of the same woman, a few hours before and after the use of a pint of beer, it has been found that the alcohol increases the proportion of water, and diminishes that of the *casseine* or curd, which is the muscle-making or nourishing element, and the presence of alcohol is very perceptible. As to the diseases produced by the influences of lactation vitiated by alcohol, Dr. Inman, of Liverpool, in his "New Theory of Disease" (1861, p. 44), admits that, from this cause, "children have suffered severely from diarrhoea, vomiting and convulsions. I have known a glass of whiskey, to-day, taken by the mother, produce sickness and indigestion in the child twenty-four hours thereafter." Dr. Edward Smith, F.R.S., London, in his "Practical Dietary" (1865, p. 162), says: "Alcoholics are largely used by many persons in the belief that they support the system and maintain the supply of milk for the infant; but this is a serious error, and is not an unfrequent cause of fits and emaciation in the child."

I have seen a case reported in the *Newcastle Express* (England), of the proceedings at an inquest at Monkwearmouth, where a surgeon stated that a child "had suffered from chronic inflammation of the bowels." And the coroner added that "there was no doubt the child had died from convulsions arising from inflammation produced by taking the alcohol in the mother's milk."

So long ago as 1814, Sir A. Carlisle, the celebrated surgeon, said of fermented liquors: "The next in order of mischief is their employment by nursing women, a common occasion of dropsy in the brain in infants. I doubt much whether the future moral habits, the temper and intellectual propensities, are not greatly influenced by the early effects of fermented liquors on the brain and sensorial organs."

That the vitiated milk secreted after using malt liquors may be productive of wasting chronic diarrhoea in infants, I am convinced, by repeated observations. I will relate a case in point which occurred in my own practice. A mason's wife, in all respects a healthy-looking woman, consulted me in the autumn of 1867 in behalf of her child, seventeen months old, which had been suffering from chronic diarrhoea of an irritable character for the whole summer. It was the most haggard-looking and emaciated creature I had ever seen, and wore a remarkable senile expression of countenance. Its abdomen was very large, distended, and tympanitic from flatulence. The skin hung in loose folds upon its emaciated frame, and its front teeth were already much decayed, giving a more ancient and haggard expression to the face. The child, I was told, was still nursing, and would not take nourishment. She added, however, that she had *kept it up* for some time by giving it, at first, a wine-glass, then half a tumbler of porter, three or four times a day, and she drank freely of porter and ale herself, by her former doctor's orders, to enable her to keep up a liberal supply of good healthy milk, as she said. She took three pint bottles each day. She

had consulted the best medical talent in the city, and was informed that, as the child was tuberculous, and of unhealthy constitution, it was a case incurable, but advised a continuation of the stimulants and the use of ale herself, to keep up the supply of milk. I regarded the case, at first, as one of starvation or inanition from mal-assimilation; but upon examination of the milk of the mother, upon which the child had been entirely dependent for nourishment, I found there was next to nothing in it to assimilate. It was almost entirely destitute of caseine or curd; the fatty matters were plentiful enough, but the quantity of sugar of milk present I did not determine, as I have since wished I had done. In one specimen there was a sensible odour of alcohol; but in another, its presence could not be detected. Regarding the case now as one of *non-prehension*, instead of *non-assimilation* as before, I recommended an immediate change of nurses, and, although comparatively poor, the anxious mother at once fell in with my recommendation, and obtained a healthy young woman as nurse from the Lying-in-Hospital, who nursed the child for three weeks. The nurse complained that, at first, the child was perfectly ravenous, and nursed too severely. However, it soon became satisfied, and gradually assumed a more natural appearance. Without any medicinal aid at all, the diarrhoea gradually ceased, and at the end of three weeks the child had lost its meagre, starved appearance, and would eat other food. They now continued to furnish it with more solid food and plenty of cow's milk, and the child grew strong and flourished. This is, although a strongly-marked case, only one of hundreds, which go to prove the impoverishing effect of alcohol upon the *feeding* and *nourishing* qualities of human milk. And I have no doubt many of the cases of presumed hydrocephalus from previous tubercular deposit; diarrhoea from accountable irritation of the *prima-viæ*; renal dropsy from nephritis or congestion; stagnation or impediment to the pul-

monary circulation, ending in congestion or bronchial affection; are directly traceable to the poisonous action of alcohol, either imbibed in the milk of mothers making use of fermented or malt liquors, or administered directly in the form of weak "slings" for the relief of wind-colic, or some other presumed cause of restlessness, or, as a diuretic, not to speak of the manner in which an occasional case is found to have been "strengthened" by the direct administration of porter or ale.

That the administration of alcoholic beverages and over-feeding, together with a total change in their accustomed diet, is the cause of failure in numerous cases of hired nurses, there is, in my mind, not the slightest question; besides, they deprave the whole being of the nurse to the extent of their besotting influence, and affect, in a similar manner, the child, by the directly injurious effect of the imbibed spirit upon its delicate brain tissue, laying the foundation of mental degradation and moral depravity.

On this point, Dr. Ellis, in his work entitled "Avoidable Causes of Disease," says: "A frequent cause of failure in the secretion of milk is to be found in the use of an unusually stimulating diet, including fermented liquors, under the plea of having to support two. This is especially true of hired wet nurses when they are taken into the families of the wealthy. The change of diet from a coarse, plain, perhaps rather scanty diet, to rich stimulating food, with free use of meats, malt liquors, and often unusual in-door confinement, is sure to make the system feverish and lessen the quantity of milk as well as to impair its quality. In all such cases, instead of seeking to increase the milk by the addition of porter or ale, which disorder the stomach, vitiate its secretions, and promote indigestion, the nurse should be put upon plain coarse diet, as near like what she had formerly used as possible, and she should be required to take active exercise, especially walks in the open air."

It may reasonably be supposed that Plato was cognizant of the fact twenty

centuries ago, that even in the very womb alcohol perverts the brain of the unborn child, and strikes a blow at reason and at virtue, when we find that he forbade the use of wine to the newly married.

And does not common observation bear me out in the assertion that, with few exceptions, depravity is stamped, like the mark of Cain, upon the foreheads of the posterity of drunken parents, especially where the mother has been a victim to the habit, or has been in the habit of using alcoholics. Then why, amid the boasted enlightenment of this nineteenth century, and under the most favourable circumstances of our Anglo-Saxon civilisation, should we, the members of an honourable profession, thus go on favouring the production of a future race of vicious and criminal persons, by recommending to mothers the use of that which can only injure and debase her infant, and may possibly degrade and besot herself.

There is a modern philosophy which teaches truly that the way to stop crime is to change the character of our reproductions, and that this is to be done by abolishing the condition of things which generates rascals. Formation, rather than reformation, is needed, *i.e.*, form the children to right models from the beginning, so will society save itself and physically regenerate the world.

Concerning the use of alcoholic stimulants by nursing mothers, Dr. Lees, F.S.A., says: "It is the real cause of so many ill-balanced minds, neither insane nor sensible; and in its higher use, it is the teeming fount of the sad idiotcy which depresses and disgraces our boasted civilisation.

Can further argument be needed to convince medical men of the great responsibility assumed in thoughtlessly recommending a plan of stimulating this glandular secretion, which is capable of working so much mischief, both directly and indirectly, upon the whole future of the persons coming under its influence.

It is an acknowledged axiom in all

rational medicine that we should always follow nature as closely as possible. This being the case, I think a glance at the animal kingdom, and a consideration of the habits of the mammalia, will be sufficient to convince any one that the animals of this class—the cow, the goat, the mare, the dog, the cat, &c., require no artificial drinks or stimulating alcoholics to produce in them an abundant secretion of healthy milk; but, on the contrary, pure water, an abundant supply of healthy food, with fresh air and exercise, is all that is required. Let us secure at least this much for our patients, and omit alcoholics, over and unwholesome feeding, with impure air, and want of exercise, and I will be responsible for results. Carrying out our comparisons with nature, or the lower animals, I would say that I think no one would venture for one moment to maintain that the milk of cows fed upon *distilling slops* or *brewery grains*, is equal in quality, although greater in quantity, than that of animals fed upon grass or hay or other natural food; and to whom pure water is freely accessible, and who have free exercise and open air. It is, indeed, a well-known fact, that cheese *cannot* be made from such milk at all; the alcohol given to the animals in such food has impoverished the secretion of its *casseine* or curd. On this subject Dr. Harley writes: "I have observed that, if a woman who is nursing eat heartily, but not immoderately, of plain food, avoiding that which is stimulating, she will, generally speaking, preserve her health, the result of which will be a healthy secretion of milk." And Dr. Condi, author of "Diseases of Children," says: "The only drink of a nurse should be water—only water or milk. All fermented and distilled liquors, as well as strong tea and coffee, she should strictly abstain from. Never was there a more absurd or pernicious notion than that wine, ale, or porter, is necessary to a female while giving suck, in order to keep up her strength or to increase the quantity and improve the nutritious properties of her milk. So far

from producing these effects, such drinks, when taken in any quantity, invariably disturb, more or less, the health of the stomach, and tend to *impair the quality*, and *diminish the quantity* of nourishment furnished by her to the infant."

In short, the more simple the diet and manner of life pursued by the mothers of a people, the more healthful and successful they will be as mothers, and the better or higher will be the physical condition of the race which owes to them not only being itself, but also, in a very large measure, the character of the physical condition and vital powers with which they are endowed.

Dr. Wm. B. Carpenter, F.R.S. (now President of the British Association), says, on this subject: "The regular administration of alcohol with the professed object of supporting the system under the demand occasioned by the flow of milk, is a mockery, a delusion, and a snare. For alcohol affords no single element of the secretion, and is much more likely to impair than to improve the quality of the milk." . . . "Under no circumstances, therefore, can we consider that the habitual, or even occasional, use of alcoholic liquors, during lactation, is necessary or beneficial."

Dr. McNish, in a few plain words, lets us have his opinion on this subject. He says: "If a woman cannot afford the necessary supply without these indulgences, she should hand over the child to some one who can, and drop nursing altogether." In such cases, where a nurse cannot be obtained, a much more judicious course is to support the child upon goat's milk, or, if that cannot be obtained, cow's milk, to which a little sugar and water has been added. I am totally averse to feeding children with solid food too soon, which overloads the feeble stomach, induces indigestion and often convulsions. I think nature plainly indicates the time when children are able to take without injury and digest solid food, by the appearance of the primary teeth; not before, but that up to that time nothing but milk diet should be given,

from which none of the evils of indigestion, such as convulsions, diarrhoea, etc., are to be anticipated.

The innumerable flours, baby foods, pennadas and concoctions ignorantly fed to infants before the stomach has matured sufficiently to digest them, is, in my opinion, a fruitful source of infantile disease and mortality.

It has been asserted, and it is an undoubted fact that has been exemplified in the histories of thousands of families, that the children born after their parents have become abstainers are not only physically healthier, but mentally brighter and better than those born before. There can be no question about the fact that the offspring of drunkenness is a lower type of humanity—both physically and mentally—than that of sobriety, and the degree of intellectual and moral elevation or degradation in the parent is, of necessity, imparted to the child, so that the children of a family are often true character representatives of Philip drunk or Philip sober; Philip singing or Philip sulky. At the same time, however, the mother, from her long connection with the child, has a greater influence upon its parental existence; and, consequently, her emotional nature is found to be most largely stamped upon the new existence, while the intellectual faculties, which are later in being developed, may more largely partake of the character of the father. Indeed, so great is the mother's influence over the offspring, both before and after birth, that it has passed into a proverb that "the mother moulds the man." Thus the most distinguished men of history have been men born of noble women. By this digression, I wish to make it appear how important it is—the connection being so intimate and the influence so perceptible—that the faculties of the mother should be clear, active, and elevated in their tendency; instead of being kept in a state of chronic semi-stupor, accompanied by a depraved temper, and a state of chronic irritability of the system from the constant habit of imbibing alcoholic stimulants, whether ale, porter, wine, gin, or whisky.

The evil effect is exerted upon the offspring in three ways: First, by deteriorating the quality and lessening the quantity of caseine in the milk, thus producing a slow degree of starvation of the albuminous tissues; the sugar and butter being also diminished in quantity, the child becomes emaciated, and its natural temperature has to be kept up by an increased supply of warm clothing in the absence of a lively action of the internal furnaces. Second: By the presence of alcohol in the pure state in the child's food, it is absorbed and acts injuriously upon the sensitive brain structure and nervous system and prevents a healthy development, favouring a lower form of cell growth, and consequently tissue structure, than nature, if supplied with healthy materials, would have furnished in the part. In this way, an inferior quality of brain is developed with an inferior caste of mind; a depraved tendency is given to the developing passions; an irritability and peevishness of temper, or, in other cases, a stupid vacancy of expression with defective memory and a general obtuseness or listlessness is developed. It is also well to remark here that the imbecility or idiotcy of children may often be traced to the drinking habits of their parents. In support of this, I quote from a report of the Inspector of Prisons and Asylums of the State of Massachusetts (Dr. Howe), from which it appears that 145 out of 300 or nearly one-half of all the cases of idiotcy and imbecility among children, had drunken parents.

Third: By its direct action upon the delicate brain substance of the child, it produces a state of chronic irritation, or sometimes subacute inflammation, leading to and often ending in hydrocephalus; or the action upon the delicate brain structure and nervous system may be of a different nature, and convulsions, paralysis, or chorea may ensue.

In support of the statements I have advanced that children of drunkards are physically degenerate, I may quote from MOREL, who states that "the degenerating effects of alcohol upon the

system ultimately influences the procreative functions; in some by diminishing the vital standard of the offspring, and in others by *annihilating* the generative powers altogether." These are not the only bad results, for we find it asserted—and every day observation confirms it—that the love of strong drink and alcoholic abuses are hereditary and transmissible. MOREL, in his "*Traité des degenerescences physiques, Intellectuelles et Morales, de l'Espèce Humaine, &c.* (1857), not only shows that the vice of drunkenness is transmissible, but proves also that imbecility, congenital or early acquired idiotcy, and other more or less complete arrests of development of the body and intellectual faculties, indicate the existence of children who have acquired the elements of their degeneracy during intra-uterine life. He points out eight different directions in which the degeneracy of the species from the influence of alcoholics is demonstrable. Of these, I may cite "The general diminution of the intellectual powers with the manifestation of the most depraved immoral tendencies." "The increase in the inmates of asylums and prisons," and "the increased development of nervous affections, especially of a paralytic and convulsive character." And to this I may add, as a result of my observations, that children of drinkers exhibit a predisposition to neuralgia. But not only is the vice of alcoholic abuse hereditary, transmissible (as shown by Morel), but it also frequently leads to insanity in the offspring of the drunkard. (Whitehead Adams.)

That an agent, whose action upon the subject is productive of such degenerative changes, should receive the sanction of medical prescription is, of itself, matter of surprise; but that it should be so prescribed on the basis of false assumptions and fallacious theories, is matter for regret. And in no instance is the recommendation of alcoholic beverages more reprehensible than to pregnant or nursing mothers.

In conclusion, I will quote the writ-

ings of a few others on this subject. Dr. Trotter says: "The food of women who suckle their own children is often very improperly selected. The quantity of the milk, not the *quality*, is studied. It is a well known fact that this secretion partakes very much of the nature of the diet used, *i.e.*, certain particles pass through the breast unassimilated. All drinks containing ardent spirit, such as wine, punch, ale and porter, must impregnate the milk; and thus the digestive organs of the babe must be quickly injured."

Dr. Andrew Combe says: "If any mother should be unconvinced of the propriety of adhering to a simple and unstimulating diet while acting as a nurse, I would earnestly direct her attention to the unquestionable fact that the best and healthiest nurses are to be found among women belonging to the agricultural population, who, though actively employed, and much in the open air, scarcely ever taste fermented liquors of any kind, but live principally upon soups, tea and vegetables, and farinaceous food. Among mothers so circumstanced it is rare to meet with one who experiences any difficulty in nursing her child, while many have milk enough for a second."

Dr. Conquest says: "There is an evil too generally prevalent, and most pernicious in its consequences upon individuals and on society, which cannot be too severely reprobated; it is the wretched habit of taking ale, wine, or spirits to remove the languor present during pregnancy and suckling. It is a practice fraught with double mischief, being detrimental to both mother and child. The relief afforded is temporary, and is invariably followed by a greater degree of languor, which demands a more powerful stimulus, which at length weakens, eventually destroys, the tone of the stomach, deteriorates the milk, and renders it altogether unfit to supply that nutriment which is essential to the existence and welfare of the child."

Dr. Bull says: "The practice of giving wine, beer, or indeed any stimulant to a healthy child, is highly reprehensible."

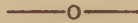
Mr. Courtney says: "I have under

my own eye many mothers who are experiencing the ill effects of the *moderate* (not the immoderate) use of these falsely-denominated 'strengthening' beverages, in the form of liver and stomach complaints, skin diseases, asthma, dropsy, &c., and every impartial and observant member of the profession must have noticed similar results. Thousands of children are annually cut off by convulsions, diarrhœa, &c., from the effects of these beverages acting through the mother."

It is unnecessary to accumulate the testimony of others upon this matter; suffice it to say that the impartial, intelligent, and observant physician will have little trouble in deciding against the use of any form of alcoholic beverage for this class of persons; and I hail with satisfaction the growing feeling against alcoholics as a class of remedies and alimentary substances, and in no instance would I hail their entire abandonment with greater delight than in the case of

nursing mothers, whose habitual use of fermented or other liquors is, in the majority of instances, followed by what I cannot designate by any milder term than "a slaughter of the innocents."

Seeing, then, that alcohol is an agent whose synonym is *death, degeneration, decay*; whose effects upon the human system, either in embryo or in infancy, in adolescence, adult years, or old age, is productive of changes the opposite of life, growth, and repair; and, as I have endeavoured to show, is deleterious in its action upon both mother and child, during the period of nursing—degrading and brutalizing both to a degree in strict proportion with the degree of indulgence;—in view of these facts is it too much to expect of a philanthropic and learned profession that they will *at least* withhold their sanction from all those man-cursing, death-dealing compounds of which *alcohol* is the active principle.—*Canada Medical Record, April, 1873.*



## SIR HENRY THOMPSON'S WARNING.

(From the *Birmingham Daily Post*.)

PEOPLE are talking a good deal about the letter which Sir Henry Thompson addressed the other day to the Archbishop of Canterbury in reference to the evils of what is called "moderate drinking." Many men are fairly startled by it; and, we think, not without reason. The tone of the letter, its quietness, and the confidence of absolute knowledge with which it is written, are specially calculated to make an impression; and this is deepened by the profession of the writer, and by his eminent rank as a medical man. It is no theorist or "fanatical" teetotaler who gives a general warning on the evils of drinking; but a medical practical practitioner of European reputation, who speaks from long and intimate observation, and who is im-

pelled by the highest possible motive, a sense of duty, prompted by special knowledge of the habit he condemns, and of the dangers which it entails. We cannot, therefore, allow Sir Henry Thompson's letter to pass without endeavouring to enforce its lesson upon the minds of our readers. We, like him, have a duty to perform; and whether it offends or pleases, we must do it.

Though by no means an agreeable one, the task is rendered less difficult by the general consciousness that the rebuke administered by Sir Henry Thompson, and the warning he gives, are justifiable and necessary. People in the middle and upper classes—it is to these he specially addresses himself—do not habitually

get drunk in these days. Any one of them who did so knows that the fact would exclude him from decent society, and would even degrade him in his own eyes. But though such persons do not get drunk, they drink a great deal too much, too steadily, and on too little inducement. It is not the single glass of wine or beer at lunch or dinner that contents them. There is a habit of morning drinking—"Just a glass of sherry, or so"—there is the drinking with dinner and the few glasses after dinner; and then, in the evening, there is "the glass of spirits-and-water," with a cigar, or as an agreeable "mellowing" finish to the day. Those who do this, habitually, day after day, year after year, would be very much surprised, and probably angry, if we said they were intemperate; and yet, if they came to reckon up the daily drinking, they would be astonished, and not impossibly alarmed, at the quantity actually consumed. If Sir Henry Thompson is right, such persons have cause for alarm. Listen to his judgment, formed upon the basis of long experience, expressed with the confidence of established scientific truth: "I have long (he says) had the conviction that there is no greater cause of evil, moral and physical, in this country, than the use of alcoholic beverages. I do not mean by this that extreme indulgence which produces drunkenness. The habitual use of fermented liquors to an extent far short of what is necessary to produce that condition, and such as is quite common in all ranks of society, injures the body and diminishes the mental power to an extent which I think few people are aware of. I have no hesitation (he continues) in attributing a very large proportion of some of the most painful and dangerous maladies which come under my notice, as well as those which every medical man has to treat, to the ordinary and daily use of fermented drink taken in the quantity which is conventionally deemed moderate."

This is the broad fact which Sir Henry Thompson impresses upon the public mind. "You drink (he says)

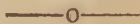
too much for bodily health and mental vigour; you think yourselves moderate; but in reality, you are intemperate to a degree which is not so much dangerous as fatal." There are thousands of people who never thought of the danger, and never fancied that they were committing excess; but who will now recognise both the folly of their practice and the peril it involves. A little self-examination is all that is needed to enable each to decide the matter for himself. Take, for instance, the case of a man who "dines out," or who gives dinner-parties twice or three times a week; there are plenty in Birmingham, so that our readers will have no trouble in applying the test. Such a man has his glass of sherry or tumbler of bitter beer at lunch; he takes a glass of sherry at dinner with soup, a little hock with the fish, champagne with the "roast," and another glass of sherry, perhaps, to close the repast. After dinner, he tries a glass or two of "curious" old port, or of "rare" Madeira, or of claret with "a fine bouquet"; and, generally, the flavour of one glass induces him to indulge in two or three more. Then his coffee is "laced" with a "thimbleful of old Cognac"; and presently, when he has had a cup of tea, and has passed into the smoking-room, a bottle of soda-water, with a little brandy in it, becomes very acceptable. Now, this is "moderate" drinking; and it fairly describes the daily life of large numbers of the well-to-do classes. To use his own words, the *bon vivant* "feels none the worse for a good dinner and a glass of good wine"; he enjoys it, he plumes himself upon moderation, goes comfortably to bed, and sleeps the sleep of the just. Yet Sir Henry Thompson tells him that by this "moderate" indulgence he is injuring his physical health, and diminishing his mental power; and this opinion is confirmed by the secret consciousness of the victim of good living; his twinge of gout, his little derangements of the liver, his temporary irritation in the morning, and his constant impression that "he wants rest." We

appeal to many who will read these lines, to say if the sketch is over-drawn?

We have spoken hitherto of the careful middle-aged men—those who are wise enough to know that beer is forbidden to them after forty, and that “spirits” are poison—but there is another sort of “moderate” drinker, who needs to be addressed in a stronger manner. This is the young “business man,” who drinks early and drinks often. He is to be found in the morning, at his club, or his favourite “bar,” in close company with a tankard of bitter beer or a glass of sherry; and as the day wears on, he is to be found there again and again, until, by nightfall—to which period he postpones anything in the way of serious drinking—he has consumed enough to unfit him for healthy exercise of either mind or body. He dines in town, perhaps—four days out of six—and regularly takes his pint of beer or his pint of sherry, with “one glass of port,” as a relish to the cheese, and just one tumbler of spirits-and-water afterwards with a cigar. In this way he wastes hours of valuable time, dissipates health, lays the foundation of permanent disease, and finally breaks down—an old man worn out before his prime. Other classes, lower than these, need scarcely be touched upon; those who sit night after night in the “smoking-rooms” of inns, and consume, “for the good of the house,” a much greater quantity of liquor than is at all good for themselves, either in person or in pocket. There is another, and more dismal chapter, which we will not open—that of the secret drinking, by women as

well as men: the incidents are too wretched, and the results too dreadful to be touched upon here.

We may rather omit the victims to concealed vice, because it is not for them Sir Henry Thompson puts forth his warning. He addresses the “moderate” drinkers; those who go quietly on by force of habit, never thinking that by imperceptible degrees they dispose of their bottle a day, and so thoroughly alcoholise their system that an occasional excess no longer seems to tell upon them: the surest proof that daily indulgence has gone far beyond the limit of safety. To such as these, the letter of Sir Henry Thompson will come with all the force of a revelation; and it should be powerful enough to make them snap a chain which, if they submit to it, will finally strangle them. If they doubt the truth of Sir Henry Thompson’s warning, let them ask their own medical men whether it is true or not. We know the answer. There is no physician or surgeon of rank in Birmingham who will not plainly tell the inquirer that no man can drink heavily without physical and mental ruin, that no man of sedentary habits can drink “moderately” with safety; that the lightest wines and the least of them are alone permissible to persons leading the lives of the ordinary middle class; that much beer is injurious to all but those who work in the open air, or take strong exercise, and possibly even to them; and that the habit of daily spirit drinking in which so many persons indulge is absolute poison to nine-tenths of those who contract the pernicious habit.



## THE USE AND ABUSE OF STRONG DRINKS.

(To the Editor of the *Pall Mall Gazette*.)

Sir,—Allow me, no teetotaler, but one of those who, while approving of stimulants as an occasional medicine, wholly disapprove of them as a drink, to add my little word to the weighty

words of Sir Henry Thompson which appeared in the newspapers a few days ago; especially with regard to my own sex and my own rank in life. I am the middle-aged “house mother”

of a tolerably large household—matron and mother, brain-worker besides, having written books for a quarter of a century. I have a wide social circle, and, I hope, a not narrow influence in my parish and neighbourhood. My creed from my youth has been that water is the best and only drink, and that alcohol, as a rule, is not necessary to either man, woman, or child, except as a medicine, and then only in very limited quantities—to be discontinued, like other medicine, as soon as the need for it is ended. The experience of a not over easy life has confirmed this. But see how different is my observation. I go out to luncheon after probably two hours of domestic avocations, and three hours of brain-work, feeling tired certainly, but I take my food and a glass of water, and revive. Other ladies also “feel tired,” but they think nothing will restore them but a glass of sherry. Others, not tired at all, take it just as a matter of course, even as, five hours after, they take the hock, claret, or champagne, with which the three glasses beside them are filled, sometimes refilled, by attentive servants. If intermediately I meet my friends at a garden-party, or afterwards at a ball, be sure they will once or twice have tasted the claret-cup or negus, or something even stronger, being still “tired.” If they will count—which they never do—they will find that on an average they take at least three glasses of some sort of wine in the course of the day. Is this necessary? During not much less than fifty years I have never found it so. Again, I visit a young nursing mother, who tells me she is obliged to take, for the sake of the baby, half a pint of stout three times a-day. To her second, eighteen months old, she is administering half a tea-spoonful of brandy in his food. “Oh, he takes it regularly, by the doctor’s order.” Her eldest, a girl of five, quaffs at dinner the daily half-glass of port wine with considerable relish. “My children require it,” sighs the mother; “they are so delicate!” No wonder. My third friend, a childless invalid, enlarges on the great comfort she

has in her glass of champagne at lunch, her eleven o’clock egg-and-sherry, or her tiny dose of port wine whenever she feels exhausted. “I don’t eat, so I must drink,” she says; “I should be dead if I didn’t.” And when I see the excited look, the miserable false energy only kept up by such means, I am inclined to say mournfully, “Better be dead.” The fourth house I enter is one where—most exceptional fact, even among women—the water-bottles are emptied at table and the decanters left full. But the family is in tribulation and terror, owing to the threats of a cook who, having made too free with the kitchen beer-barrel, has seized a carving-knife and proposed to kill the parlour-maid who suggested she had better go to bed. “I don’t know how it is,” sighs the mistress; “but so many women servants get drunk nowadays.” I tell her my simple story, that for twenty years I have never allowed beer in my kitchen, or reckoned beer-money in my servants’ wages. They must either accept the alternative and drink water—as I do—or give up the place. They have never given up the place, and ours is still one of the very few houses where there is no trouble with servants. But when I suggested these facts she shook her head. She had not courage to commence such a reform.

Yet, if reform does commence, it must be from the upper and not the lower ranks—also, I firmly believe, with women rather than men. Let every mother and mistress refuse strong drink herself, and keep it from those whose welfare she has in her hands—her children and her servants—and the leaven will soon diffuse itself far and wide. To preach usefully one must practise. Nor is it so very difficult. There is more strength even for poor tired women—and we often are very tired, we mothers of families—more real strength in a bit of brown bread and a cup of milk, or even a glass of water, than in half a pint of sherry. And, oh, if every young mother did not believe, in spite of doctors and nurses, that stimulants are

necessary to herself or her babe, what a difference it would make in the health of the next generation; and how it might nullify a frightful fact, which everybody knows and nobody speaks of, that among the middle and upper classes there are many confirmed drunkards, become such simply because, as mothers of large families, they got into the habit of comforting themselves in their physical weakness and mental cares, by taking "just a little more than was good for them." For the children—dosed with wine and brandy from babyhood by the doctor's order—God help them! Their parents might as well have fed them upon poison. Besides creating a perpetual want it neutralises the benefit that stimulants often are, used medicinally and cautiously, and laid aside, like medicine, as soon as the need ceases. When I look at my own bright, healthy, merry child, who knows not

the taste of either wine or physic, I long to say to every mother, "Defy doctors, old women, and all the world. Bring up your children as Nazarites till they are old enough to refuse the evil and choose the good." Any one who has ever known the wholesome cheerfulness and healthy strength of mind and body produced by a constitution which has always been kept pure from alcohol, and which, even if delicate, is sound, and owes nothing to the fictitious stimulant of any spirituous liquors—any one, I say, who from youth upwards has known the blessing of a life like this, will never be in doubt which to choose.

Pardon this letter, sir. I give you my name, but to the public it matters not. I am neither a man, nor a philosopher, but

ONLY A MOTHER.

March 29th.

## STRONG DRINK AND BRIGHT'S DISEASE.

DR. GEORGE JOHNSON, F.R.S., Physician to King's College Hospital, read a paper at the Royal Medical and Chirurgical Society on Tuesday, 27th of May.

"About ten years since the author had made a tabular analysis of nearly 300 cases of albuminuria. In each case special inquiry had been made as to the probable exciting cause of the malady, and in the tabular statement of the main points in the history of these cases one column is set apart for the etiology of the disease. Some recent discussions on the influence of alcohol in exciting diseases of the kidney had led him to refer to his analysis of cases for evidence bearing upon this question; nine-tenths of the cases analysed belonging to the class of hospital or dispensary patients. Taking 200 consecutive cases, it is shown that the various etiological influences, single, and in combination,

come under no fewer than thirty-three heads. It is also shown that scarlet fever, intemperance, cold, wet, and gout—these influences, either single or combined, account for 120 cases out of 200, or 60 per cent. Thus, albuminuria was probably the result of scarlet fever in 24 out of 200 cases, or 12 per cent.; of intemperance in 28, or 14 per cent.; of intemperance and gout in 12, or 6 per cent.; of intemperance and cold in 12, or 6 per cent.; of gout in 8, or 4 per cent.; of cold and wet in 23, or 11.5 per cent.; of cold in 13, or 6.5 per cent. It is shown that intemperance, either alone or combined with other influences, was the probable cause of albuminuria in 58 out of 200 cases, or 29 per cent. Of these 58 cases, in 28 intemperance was believed to be the sole cause; in 12 intemperance with gout, in 12 with cold, in 4 with syphilis, and in 2 with lead. Cold, either alone or combined

with other influences, was the exciting cause of albuminuria in 25 per cent. of the cases. In 6.5 per cent. cold alone is believed to have been the cause of albuminuria, in 11.5 per cent. cold and wet, in 6 per cent. cold and intemperance, and in 1 per cent. cold and fatigue. It appears, then, that albuminuria was associated with scarlet fever in 12 per cent. out of 200 cases, with exposure to cold and wet in 25 per cent., and with intemperance in 29 per cent.

"The following table shows the proportion per cent. of deaths, recoveries, and of persistent albuminuria in cases resulting from—1. Scarlet fever. 2. Exposure to cold and wet. 3. Habits of intemperance.

	Scarlet Fever.	Cold & Wet.	Intem- perance.
Deaths ... ..	45.83	27.5	67.23
Recoveries ... ..	50	38.88	10.36
Persistent albuminuria ... ..	4.16	33.33	22.41

"Of the 58 intemperate patients, 11 were women, and 47 were men. In 5 cases out of the 47 men the occupation had not been recorded. Of the 42 men whose occupations had been noted, 5 were waiters. The remaining 37 intemperate men had no fewer than 30 different occupations, not one of them connected with the manufacture, sale, or distribution of alcoholic liquors. Evidently, then,

it is not right to assume that men in the class of hospital patients who are not engaged in the liquor trade, and not notorious drunkards, may be placed in a "non-alcoholic" class.

"The excess of Bright's disease amongst males, as compared with females, is explained by the fact that as a rule men are more intemperate and more exposed to cold and wet than women. Amongst the cases analysed, 76 per cent. were males, and 24 per cent. females. Out of the 58 cases associated with intemperance, 83 per cent. were males; and of the 36 resulting from cold and wet, 77 per cent. were males."

In a lecture reported in the *British Medical Journal* for June 21, Dr. Johnson says:—"As a rule, it is well to give no alcoholic stimulants; or, if need be, to give them very sparingly in cases of acute Bright's disease. The imbibition of alcohol imposes extra work upon the kidney, and so is opposed to the principle of lessening as much as possible the work of the inflamed gland. Excess of alcohol is, amongst the lower classes, one of the most frequent causes of albuminuria; and a very moderate employment of alcohol may tend to perpetuate and aggravate disease originating from other causes."

## Notes and Extracts.

A LIBERAL TEETOTALLER.—Among the list of contributions for the past year to the Westminster Hospital, we find the following:—"A Teetotalter, who is of opinion that the use of alcoholics in medical and hospital practice far exceed the necessities, £124 16s."

THE HABITUAL DRUNKARDS' BILL.

—We regret to learn that the last chance of Mr. Donald Dalrymple finding a night on which to advance the progress of his Habitual Drunkards' Bill, is for this session lost, and that thus the result of much labour, expense, and sacrifice of time and thought is for the present nullified, and the attainment of any useful

result is jeopardised.—*London Medical Record*.

**DEATH AND THE DRUNKARD.**—The report of the Health Department of New York for the year 1872 states that the year's mortality in that city, with a population estimated at one million, was 32,647, being 32.6 per thousand. The report shows the following striking facts:—Alcoholism is returned as the direct cause of death in 314 cases; delirium tremens in 102 cases; and the certificates of deaths state intemperance as either the direct or complicating cause of death in altogether no less than 826 cases, being over two a day, and constituting the very large proportion of one in every forty deaths. Matters are bad enough in London, but nothing like this. The return of the causes of death in London in 1871, the population being considerably more than three times that of New York, shows sixty-two deaths from alcoholism (intemperance), and eighty-nine from delirium tremens; we have no published return of complicating causes of death.—*Times*.

**PREPARATION OF ALCOHOL FROM SAWDUST.**—According to M. Zetterlund (*Moniteur Scient.*, *Quesneville* Oct., 1870, No. 370) it appears that the preparation of alcohol from sawdust may be successfully carried on industrially. Into an ordinary steam-boiler, heated by means of steam, were introduced 9 cwts. of very wet sawdust, 10.7 cwts. of hydrochloric acid (sp. gr. = 1.18), and 30 cwts. of water; after eleven hours' boiling, there was formed 19.67 per cent. of grape sugar. The acid was next saturated with chalk, so as to leave in the liquid only a small quantity (half degree by Ludersdorf's acid areometer); when the saccharine liquid was cooled down to 30 degs., yeast was added, and the fermentation finished in twenty-four hours. By distillation, there were obtained 26.5 litres of alcohol of 50 per cent. at 15 degs., quite free from any smell of turpentine, and of excellent taste. When all the cellulose present in sawdust might be converted into sugar, 50 kilos. of the former substance would yield, after fermentation, 12

litres of alcohol at 50 per cent.—*British Medical Journal*.

**TESTIMONY OF AN OCTOGENARIAN.**—In a letter dated Nottingham, 17th February, 1873, Mr. John Higginbottom, F.R.C.S., F.R.S., says:—"I commenced abstaining from all intoxicating drinks in 1806, when I was eighteen and a half years old, now sixty-seven years since. I discontinued all intoxicating drinks as a medicine several years before the temperance societies began in England, and have not prescribed or allowed them for more than forty years, and banished them from my house at the same time, considering them as thieves and murderers. I expected to die when seventy-two years of age, the age of my forefathers, but I have now arrived to my eighty-fifth year (on the 14th of June I shall be eighty-five). My intellect is quite clear, and my hand as steady as at any period of my life. The writing in this letter has no appearance of old age. I owe all my success in life to the good Providence of God and true temperance, which is teetotalism."

**COFFEE VERSUS ALCOHOL.**—Professor Phipson makes an interesting communication with respect to the cure of drunkenness. He considers that coffee may be employed successfully in the work of reform. By experiments recently made in France it has been found that this popular beverage is a most potent auxiliary in the crusade against alcohol. Persons addicted to drinking have been cured by finding a good cup of tea or coffee within their reach. If a few sips of good tea or coffee are administered whenever the craving for liquor comes on, they will prove sufficiently powerful to extinguish it for a length of time. The practice must be persevered in, and the habit of drunkenness can thus be entirely overcome. Professor Phipson thinks these successful experiments were carried out by Dr. Lallemand. He calls attention to the important lessons that may be drawn from them. They prove that theine (caffeine), the active principle of tea and coffee, is stimulating without being intoxicating, and that when the stimulating action is set up the craving for

intoxication passes away. At any rate, the suggestion is worthy of notice, and at the present time, when so much is said and written on the subject of intoxication, it is most appropriate. The chief advantage of the scheme is, that it is easy of application, and seems to require nothing but patience and perseverance on the part of those engaged in it to ensure success. — *Western Morning News*.

UTTERLY LOST. — Louisa Gould, a young woman, who has been many times charged at the Marlborough Street Police Court, and who, when before Mr. Newton last week, presented a shabby appearance, but was now remarkably well dressed, was again brought up, charged with disorderly conduct. From the evidence it appeared that about half-past one on the morning of the 25th ult. prisoner and another female were making a great disturbance in the neighbourhood of King Street, St. James's, when they were requested by a constable to go away. They went a short distance, and again made a great noise, and on another constable requesting them to leave, the prisoner refused, and she was then taken into custody. The prisoner (who invariably when charged makes a counter charge against the police-constable taking her into custody), said the police jeered at and insulted her, and struck her, and she asked for justice. Mr. Newton said she should have justice, and so should the public who were disturbed by her. The police denied the truth of the prisoner's statement. Laurence Poole, the gaoler, produced a list, showing that the prisoner had been thirty-three times charged at this court and twenty-four times convicted for being drunk and incapable, drunk and disorderly, and drunk and annoying, and said that every chance had been given her to mend. Some months ago she was sent to Miss Stride's Home, and then to service, and after being in it a time she left, and resumed her old course of life. Mr. Newton looked over the book produced, which commenced in 1865, and bore the dates of the different times when the prisoner was charged, and of the convictions.

Inspector Hume said he was instructed by Superintendent Dunlap to state that the prisoner was a source of much annoyance and trouble to the police, continually interfering with them while in the execution of their duty. Mr. Newton said he was aware that all that could be done for the prisoner had been done, and he committed her under the Vagrancy Act, as an incorrigible, for three months. — *Evening Standard*, June 3, 1873.

SIR HENRY THOMPSON ON MODERATE DRINKING. — Sir Henry Thompson, F.R.C.S., Surgeon-Extraordinary to His Majesty the King of the Belgians, and Surgeon to University College Hospital, has addressed the following letter to His Grace the Archbishop of Canterbury:—"I have long had the conviction that there is no greater cause of evil, moral and physical, in this country than the use of alcoholic beverages. I do not mean by this that extreme indulgence which produces drunkenness. The habitual use of fermented liquors to an extent far short of what is necessary to produce that condition, and such as is quite common in all ranks of society, injures the body and diminishes the mental power to an extent which I think few people are aware of. Such, at all events, is the result of observation during more than twenty years of professional life devoted to hospital practice, and to private practice in every rank above it. Thus, I have no hesitation in attributing a very large proportion of some of the most painful and dangerous maladies which come under my notice, as well as those which every medical man has to treat, to the ordinary and daily use of fermented drink taken in the quantity which is conventionally deemed moderate. Whatever may be said in regard to its evil influence on the mental and moral faculties, as to the fact above stated I feel that I have a right to speak with authority; and I do so solely because it appears to me a duty, especially at this moment, not to be silent on a matter of such extreme importance. I know full well how unpalatable is such truth, and how such a declaration brings me into

painful conflict, I had almost said with the national sentiments and the time-honoured and prescriptive usages of our race. Cherishing such convictions I rejoice to observe an endeavour to organise on a large scale in the National Church a special and systematic plan for promoting temperance, and I cannot but regard this as an event of the highest significance. I believe that no association in this country has means to influence society in a favourable direction at all comparable to that existing in the English Church, and the example and teaching of its clergy may do more than any of the other associations which have long laboured with the same object to diminish the national ignorance on this subject, and the consequent national vice. My main object is to express my opinion, as a professional man, in relation to the habitual employment of fermented liquor as a beverage. But if I ventured one step further, it would be to express a belief that there is no single habit in this country which so much tends to deteriorate the qualities of the race, and so much disqualifies it for endurance in that competition which, in the nature of things, must exist, and in which struggle the prize of superiority must fall to the best and to the strongest."

A WELL-MERITED REBUKE.—With something like regret we have noticed that both the *British Medical Journal* and the *Medical Record* (both under one editorial management) seem to have undertaken to become organs for the "new tea spirit, Robur." We should never write against any article simply because its proprietors choose to advertise it abundantly; but in this case there is a somewhat dangerous responsibility involved. We are not prepared at this moment, though we shall be soon, perhaps, to assert how much theine is contained in robur, nor how it gets there; but we do know that robur is an alcoholic beverage, of the strength of whisky, and the greatest physicians of the day have united in expressing their belief that the encouragement of alcoholic drinks by medical men is a fearful and ruin-

ous course to adopt. By the way, too, it was said that the editor of the *British Medical Journal* was the gentleman who drew up that celebrated manifesto against alcohol; and yet we have before us an article from that journal in which, after an elaborate preface written in the approved pseudo-scientific style, with much nonsense about the "combination of theine and tannin with alcohol," we read the following puff, for it is nothing else, and we read it with extreme regret: "That alcohol gives wings to tea, everyone who has added a *chasse* to a cup of black coffee as a digestive after dinner, or has 'laced' a cup of tea with a liqueur of brandy after exhaustive fatigue, will readily testify. The same principle is involved in the composition of robur. It is a pure spirit, singularly free from fusel oil, with which brandy and whisky are largely contaminated. It is extremely palatable—most so when mixed, like toddy, with hot water, and sweetened. It contains a considerable percentage of theine, with tannin and sugar. It leaves on the palate the pure flavour of tea, and no more wholesome spirit can be found. *As a spirit intended for popular use, it has many great merits. It does not tempt to intemperance, for it rather helps than muddles the intelligence*; and if robur were substituted for gin, brandy, or whisky, it would, we think, be a clear gain to the cause of temperance. The digestive properties which Dr. Lankester asserts it to possess are such as have long been attributed to the *chasse café*, which it resembles in character. Medically, it is, we think, likely to be more useful than any of the forms of spirit which are in daily use. On the whole, we consider that no more has been claimed for it than is fairly its due, and that it is a valuable addition to the dietetic list." We have italicised the passage which, in our opinion, is rather the worst of all. In the *Medical Record* we are told that "in the treatment of exhaustive diseases, wherever spirit is now employed, robur is, we think, called to render great services, and deserves a very ample trial."—*Chemist and Druggist*.







